MBS MacCI Plugin Documentation

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0.1 Introduction

This is the PDF version of the documentation for the Xojo Plug-in from Monkeybread Software Germany.
Plugin part: MBS MacCI Plugin

0.2 Content

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Chapter 4

CoreImage

4.1   class CIAttributeMBS

4.1.1   class CIAttributeMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: A class for attributes of CoreImage Filters.

4.1.2   Properties

4.1.3   ClassName as string

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Class name of the filter.
Notes: (Read only property)

4.1.4   DefaultAffineTransform as NSAffineTransformMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The default value for this color.
Notes: Only valid for affine transformations.
(Read only property)

4.1.5   DefaultColor as CIColorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The default value for this color.
Notes: Only valid for colors.
(Read only property)

4.1.6   DefaultNumber as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The default value for this color.
Notes: Only valid for numbers.
(Read only property)

4.1.7   DefaultValue as Variant

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The default value.
Notes: (Read only property)

4.1.8   DefaultVector as CIVectorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The default value for this color.
Notes: Only valid for vectors.
(Read only property)

4.1.9   description as string

Plugin Version: 9.7, Platform: macOS, Targets: All.

Function: The description of this attribute.
Notes: (Read only property)

4.1.10   DisplayName as string

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The localized display name for the attribute.
Notes: Not all attributes do have a localized name and not all do have a name at all.
(e.g. outputImage normally has no display name)
(Read only property)

4.1.11   HasMaxNumber as Boolean

Plugin Version: 10.0, Platform: macOS, Targets: All.

Function: Whether this attribute has a defined maximum value.
Notes: (Read only property)

4.1.12   HasMinNumber as Boolean

Plugin Version: 10.0, Platform: macOS, Targets: All.

Function: Whether this attribute has a defined minimum value.
Notes: (Read only property)

4.1.13   HasSliderMaxNumber as Boolean

Plugin Version: 10.0, Platform: macOS, Targets: All.

Function: Whether this attribute has a defined slider maximum value.
Notes: (Read only property)

4.1.14   HasSliderMinNumber as Boolean

Plugin Version: 10.0, Platform: macOS, Targets: All.

Function: Whether this attribute has a defined slider minimum value.
Notes: (Read only property)

4.1.15   IdentityAffineTransform as NSAffineTransformMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The value to be used to keep the filter doing nothing.
Notes: Only valid for affine transformations.
(Read only property)

4.1.16   IdentityNumber as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The value to be used to keep the filter doing nothing.
Notes: Only valid for numbers.
(Read only property)

4.1.17   IdentityValue as Variant

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The identity value.
Notes: (Read only property)

4.1.18   IdentityVector as CIVectorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The value to be used to keep the filter doing nothing.
Notes: Only valid for vectors.
(Read only property)

4.1.19   LocalizedDescription as string

Plugin Version: 9.7, Platform: macOS, Targets: All.

Function: Description of the filter intended for UI display (eg. localized)
Notes: (Read only property)

4.1.20   MaxNumber as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Maximum value for the attribute.
Notes: Only valid for numbers.

If no value is defined, this property is zero and HasMaxNumber returns false.
(Read only property)

4.1.21   MinNumber as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Minimum value for the attribute.
Notes: Only valid for numbers.
If no value is defined, this property is zero and HasMinNumber returns false.
(Read only property)

4.1.22   Name as string

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The name of this attribute.
Notes: (Read only property)

4.1.23   SliderMaxNumber as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Maximum value for the slider.
Example:

dim f as CIFilterEdgesMBS
dim a as CIAttributeMBS

f=new CIFilterEdgesMBS
f.inputImage=NewCIImagewithFileMBS(SpecialFolder.Desktop.Child("Paris.jpg"))

a=f.AttributeinputIntensity
Title=str(a.SliderMinNumber)+" "+str(a.SliderMaxNumber)
f.inputIntensity=a.SliderMaxNumber

Backdrop=f.outputImage.RenderPicture

Notes: Only valid for numbers.
If no value is defined, this property is zero and HasSliderMaxNumber returns false.
(Read only property)

4.1.24   SliderMinNumber as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Minimum value for the slider.
Notes: Only valid for numbers.
If no value is defined, this property is zero and HasSliderMinNumber returns false.
(Read only property)

4.1.25   Type as string

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The type of this attribute.
Notes: Types for numbers:
kCIAttributeTypeDistance
kCIAttributeTypeBoolean
kCIAttributeTypeTime
kCIAttributeTypeAngle
kCIAttributeTypeScalar

Types for vectors:
kCIAttributeTypePosition (2 Dimensions)
kCIAttributeTypeOffset (2 Dimensions)
kCIAttributeTypePosition3 (3 Dimensions)
kCIAttributeTypeRectangle (4 Dimensions)

Types for colors:
kCIAttributeTypeOpaqueColor

Types for images:
kCIAttributeTypeGradient
(Read only property)

4.1.26   Values as Dictionary

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Queries all values as dictionary.
Notes: (Read only property)

4.2 class CIAztecCodeDescriptorMBS

4.2.1 class CIAztecCodeDescriptorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: CIAztecCodeDescriptor is a concrete subclass of CIBarcodeDescriptor that defines an abstract representation of an Aztec Code symbol.
Notes: CIAztecCodeDescriptor may not be instantiated directly.
Subclass of the CIBarcodeDescriptorMBS class.

4.2.2 Methods

4.2.3 Constructor(errorCorrectedPayload as MemoryBlock, isCompact as Boolean, layerCount as Integer, dataCodewordCount as Integer)

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Initializes a descriptor that can be used as input to CIBarcodeGenerator.

4.2.4 descriptorWithPayload(errorCorrectedPayload as MemoryBlock, isCompact as Boolean, layerCount as Integer, dataCodewordCount as Integer) as CIAztecCodeDescriptorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Construct a descriptor that can be used as input to CIBarcodeGenerator.

4.2.5 Properties

4.2.6 dataCodewordCount as Integer

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The number of non-error-correction codewords carried by the Aztec code symbol.
Notes: Used to determine the level of error correction in conjunction with the number of data layers. Valid values are 1...2048. Compact symbols can have up to 64 message codewords.

Note that this value can exceed the number of message codewords allowed by the number of data layers in this symbol. In this case, the actual number of message codewords is 1024 fewer than this value and the message payload is to be interpreted in an application-defined manner.

(Read only property)

4.2.7   errorCorrectedPayload as MemoryBlock

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The error-corrected codewords that comprise the Aztec code symbol.
Notes: Aztec Codes are formally specified in ISO/IEC 24778:2008(E).

The error corrected payload consists of the 6-, 8-, 10-, or 12-bit message codewords produced at the end of the step described in section 7.3.1.2 "Formation of data codewords", which exists immediately prior to adding error correction. These codewords have dummy bits inserted to ensure that an entire codeword isn't all 0's or all 1's. Clients will need to remove these extra bits as part of interpreting the payload.
(Read only property)

4.2.8   isCompact as Boolean

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: A boolean indicating whether the symbol is compact.
Notes: Compact Aztec symbols use one-fewer ring in the central finder pattern than full-range Aztec symbols of the same number of data layers.
(Read only property)

4.2.9   layerCount as Integer

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The number of data layers in the Aztec code symbol.
Notes: Combined with the isCompact property, the number of data layers determines the number of modules in the Aztec Code symbol. Valid values range from 1 to 32. Compact symbols can have up to 4 data layers.

The number of data layers also determines the number of bits in each data codeword of the message carried by the Aztec Code symbol.
(Read only property)

4.3 class CIBarcodeDescriptorMBS

4.3.1 class CIBarcodeDescriptorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: CIBarcodeDescriptor is an abstract base class that defines an abstract representation of a machine readable code's symbol attributes.
Notes: Each subclass is sufficient to recreate the symbol exactly as seen or to be used with a custom parser. Subclasses of CIBarcodeDescriptor are defined for each code type to contain the formal specification of each symbology.
Available on macOS 10.13.

4.3.2 Methods

4.3.3 Constructor(Handle as Integer)

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor with passing in a handle to an existing object.
Notes: Handle must be of type CIBarcodeDescriptor and will be retained.

4.3.4 copy as CIBarcodeDescriptorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Creates a copy of this barcode description.

4.3.5 Properties

4.3.6 description as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The description string to debug.
Notes: (Read only property)

4.3.7 Handle as Integer

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The internal object reference.
Notes: (Read only property)

4.4   class CIColorMBS

4.4.1   class CIColorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: A class for a color in CoreImage.
Blog Entries

- Tip of day: Gradients with CoreImage Filter
- MBS Real Studio Plugins, version 13.1pr13
- MBS Real Studio Plugins, version 12.1pr5

4.4.2   Methods

4.4.3   blackColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Returns stock black color with sRGB color space.
Notes: Available in macOS 10.12 or newer.

4.4.4   blueColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Returns stock blue color with sRGB color space.
Notes: Available in macOS 10.12 or newer.

4.4.5   clearColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Returns stock clear color with sRGB color space.
Notes: Transparent color.
Available in macOS 10.12 or newer.

4.4.6   colorWithCGColor(ColorValue as CGColorMBS) as CIColorMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Creates a new color based on a CoreGraphics color.

4.4.7   colorWithRGB(Red as Double, Green as Double, Blue as Double) as CIColorMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Creates a color object using the specified RGB color component values
Notes: r: The value of the red component.
g: The value of the green component.
b: The value of the blue component.

Initializes Core Image color object that represents an RGB color in the color space specified by the Quartz 2D constant kCGColorSpaceGenericRGB.
See also:

4.4.8   colorWithRGB(Red as Double, Green as Double, Blue as Double, Alpha as Double) as CIColorMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Creates a color object using the specified RGBA color component values.
Notes: r: The value of the red component.
g: The value of the green component.
b: The value of the blue component.
a: The value of the alpha component.

Initializes a Core Image color object that represents an RGB color in the color space specified by the Quartz 2D constant kCGColorSpaceGenericRGB and an alpha value.
See also:

4.4.9 colorWithRGB(Red as Double, Green as Double, Blue as Double, Alpha as Double, ColorSpace as CGColorSpaceMBS) as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Create a new color object in a given colorspace.
Notes: Will return nil if the colorspace is not kCGColorSpaceModelRGB.
Available in macOS 10.12 or newer.
See also:

4.4.10 colorWithRGB(Red as Double, Green as Double, Blue as Double, ColorSpace as CGColorSpaceMBS) as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Create a new color object in a given colorspace.
Notes: Will return nil if the colorspace is not kCGColorSpaceModelRGB.
Available in macOS 10.12 or newer.
See also:

4.4.11 colorWithString(representation as String) as CIColorMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Creates a color from a color string representation.

4.4.12 Component(index as UInt32) as Double

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: The color component with the given index.
Notes: Index is from 0 to NumberOfComponents - 1.

4.4.13 Constructor(ColorValue as CGColorMBS)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new CIColor based on the given CoreGraphics color.
Notes: On success, the handle is not zero.
See also:

4.4.14 Constructor(Handle as Integer)

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: Initializes object with given object reference.
Notes: ref should be a CIColor* and the object is retained.
Raises UnsupportedOperationException if object is not a CIColor.
See also:

4.4.15 Constructor(Red as Double, Green as Double, Blue as Double)

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Creates a color object using the specified RGB color component values
Notes: r: The value of the red component.
g: The value of the green component.
b: The value of the blue component.

Initializes Core Image color object that represents an RGB color in the color space specified by the Quartz 2D constant kCGColorSpaceGenericRGB.
See also:

4.4.16 Constructor(Red as Double, Green as Double, Blue as Double, Alpha as Double)

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Creates a color object using the specified RGBA color component values.
Notes: r: The value of the red component.
g: The value of the green component.
b: The value of the blue component.
a: The value of the alpha component.

Initializes a Core Image color object that represents an RGB color in the color space specified by the Quartz 2D constant kCGColorSpaceGenericRGB and an alpha value.
See also:

4.4.17   Constructor(Red as double, Green as Double, Blue as double, Alpha as Double, ColorSpace as CGColorSpaceMBS)

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Create a new color object in a given colorspace.
Notes: Will fail if the colorspace is not kCGColorSpaceModelRGB.
Available in macOS 10.12 or newer.
See also:

4.4.18   Constructor(Red as double, Green as Double, Blue as double, ColorSpace as CGColorSpaceMBS)

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Create a new color object in a given colorspace.
Notes: Will fail if the colorspace is not kCGColorSpaceModelRGB.
Available in macOS 10.12 or newer.
See also:

4.4.19   copy as CIColorMBS

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Creates a copy of the color object.

4.4.20   cyanColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Returns stock cyan color with sRGB color space.
Notes: Available in macOS 10.12 or newer.

4.4.21   grayColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Returns stock gray color with sRGB color space.
Notes: Available in macOS 10.12 or newer.

4.4.22   greenColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Returns stock green color with sRGB color space.
Notes: Available in macOS 10.12 or newer.

4.4.23   magentaColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Returns stock magenta color with sRGB color space.
Notes: Available in macOS 10.12 or newer.

4.4.24   redColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Returns stock red color with sRGB color space.
Notes: Available in macOS 10.12 or newer.

4.4.25   whiteColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Returns stock white color with sRGB color space.
Notes: Available in macOS 10.12 or newer.

4.4.26   yellowColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Returns stock yellow color with sRGB color space.
Notes: Available in macOS 10.12 or newer.

4.4.27   Properties

4.4.28   Alpha as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The alpha value of the color.
Notes: Values range between 0.0 to 1.0.
(Read only property)

4.4.29   Blue as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The (unpremultiplied) blue component of the color.
Notes: Values range between 0.0 to 1.0.
(Read only property)

4.4.30   ColorSpace as CGColorSpaceMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The color space object associated with the color.
Notes: nil on any error.

(Read only property)

4.4.31 description as String

Plugin Version: 9.7, Platform: macOS, Targets: All.

Function: Returns the textual description for this color.
Notes: (Read only property)

4.4.32 Green as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The (unpremultiplied) green component of the color.
Notes: Values range between 0.0 to 1.0.
(Read only property)

4.4.33 Handle as Integer

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: The handle to the CIColor object used internally.
Notes: (Read only property)

4.4.34 NumberOfComponents as Integer

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The number of color components (including alpha).
Notes: (Read only property)

4.4.35 Red as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The (unpremultiplied) red component of the color.
Notes: Values range between 0.0 to 1.0.
(Read only property)

4.4.36   StringRepresentation as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Returns a formatted string with the components of the color.
Example:

dim c as CIColorMBS

c=NewCIColorMBS(1,0,0)

MsgBox c.stringRepresentation // shows "1 0 0 1"

Notes: Returns "" on any error.
(Read only property)

4.5 class CIContextMBS

4.5.1 class CIContextMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: A class for a drawing context for CoreImage.
Blog Entries

- MBS Xojo Plugins in version 19.2

- MBS Xojo Plugins, version 19.2pr3

- Load RAW image on MacOS with options

- MBS Xojo Plugins, version 17.3pr3

- MBS Xojo / Real Studio Plugins, version 14.2pr4

- MBS Real Studio Plugins, version 13.1pr3

- MBS Real Studio Plugins, version 12.1pr5

4.5.2 Methods

4.5.3 ClearCaches

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Frees any cached data (such as temporary images) associated with the context.
Notes: This also runs the garbage collector.

4.5.4 Constructor

Plugin Version: 17.3, Platform: macOS, Targets: All.

Function: Creates a new CIContext without a specific target.
Notes: Great to create a context and render something inside.
See also:

4.5.5   Constructor(cgcontext as CGContextMBS)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Create a new CoreImage context object, all output will be drawn into the CG context.
Notes: On success, the handle is not zero.
See also:

4.5.6   Constructor(cgcontext as CGContextMBS, OutputColorSpace as CGColorSpaceMBS, WorkingColorSpace as CGColorSpaceMBS, UseSoftwareRenderer as Boolean)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Create a new CoreImage context object with options, all output will be drawn into the CG context.
Notes: OutputColorSpace: A CGColorSpaceMBS object defining the color space in which all intermediate operations are performed.
WorkingColorSpace: A CGColorSpaceRef object defining the color space that images are converted to before rendering into the context.
UseSoftwareRenderer: Whether you want software renderer only.

On success, the handle is not zero.
See also:

4.5.7   Constructor(Handle as Integer)

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: Initializes object with given object reference.
Notes: ref should be a CIContext* and the object is retained.

Raises UnsupportedOperationException if object is not a CIContext.
See also:

4.5.8   Constructor(Pic as Picture)

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Creates a context targeting the picture.
Notes: Works only on Cocoa target.
See also:

4.5.9   CreateCGImage(image as CIImageMBS, r as CGRectMBS = nil) as CGImageMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new image with the content of the CIImage.
Notes: Render the region 'r' of image 'im' into a temporary buffer using the context, then create and return a new CoreGraphics image with the results.
If r is nil, the whole image extent is used.
See also:

4.5.10   CreateCGImage(image as CIImageMBS, r as CGRectMBS, ColorSpace as CGColorSpaceMBS) as CGImageMBS

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Creates a new image with the content of the CIImage.
Notes: Render the region 'r' of image 'im' into a temporary buffer using the context, then create and return a new CoreGraphics image with the results.
If r is nil, the whole image extent is used.
See also:

4.5.11   createCGLayer(size as CGSizeMBS, info as dictionary = nil) as CGLayerMBS

Plugin Version: 14.1, Platform: macOS, Targets: Desktop, Console & Web.

Function: Creates a CGLayer object from the provided parameters.
Notes: size: The size, in default user space units, of the layer relative to the graphics context.
ifno: A dictionary, which is passed to CGLayerCreateWithContext as the auxiliaryInfo parameter. Pass nil because this parameter is reserved for future use.

Returns a CGLayer object.

After calling this method, Core Image draws content into the CGLayer object. Core Image creates a CGLayer object by calling the Quartz 2D function CGLayerCreateWithContext, whose prototype is:

CGLayerRef CGLayerCreateWithContext (
CGContextRef context,
CGSize size,
CFDictionaryRef auxiliaryInfo
);
Core Image passes the CIContext object as the context parameter, the size as the size parameter, and the dictionary as the auxiliaryInfo parameter. For more information on CGLayer objects, see Quartz 2D Programming Guide and CGLayer Reference.

Available in OS X v10.4 and later.

4.5.12   Destructor

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: The destructor.

4.5.13 DrawImage(ciImage as CIImageMBS)

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Render the ciImage to the the context's destination.
Notes: Rendering the image will cause the calculations to be done so this call is quite expensive.

4.5.14 DrawImagePoint(ciImage as CIImageMBS, DestPoint as CGPointMBS, SourceRect as CGRectMBS = nil)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use DrawImageRect instead.
Function: Render the subregion 'SourceRect' of 'ciImage' to point 'DestPoint' in the context's destination.
Notes: Rendering the image will cause the calculations to be done so this call is quite expensive.
If SourceRect is nil, we use the extent from image.

4.5.15 DrawImageRect(ciImage as CIImageMBS, DestRect as CGRectMBS, SourceRect as CGRectMBS = nil)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Render the rectangle 'SourceRect' of 'ciImage' to the rectangle 'DestRect' in the context's destination.
Notes: Rendering the image will cause the calculations to be done so this call is quite expensive.
If SourceRect is nil, we use the extent from image.

4.5.16 Flush

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Flushes drawings to CGContext and target picture (if any).

4.5.17 HEIFRepresentationOfImage(Image as CIImageMBS, format as Integer = 24, colorSpace as CGColorSpaceMBS = nil, options as dictionary = nil) as MemoryBlock

Plugin Version: 19.2, Platform: macOS, Targets: All.

Function: Render a CIImage to HEIF data.
Example:

Dim f As FolderItem = SpecialFolder.Desktop.Child("test.jpg")
Dim i As New CIImageMBS(f)
Dim c As New CIContextMBS

Dim heifData As MemoryBlock = c.HEIFRepresentationOfImage(i)

Break // see debugger

Notes: Image must have a finite non-empty extent.
The CGColorSpace must be kCGColorSpaceModelRGB or kCGColorSpaceModelMonochrome and must match the specified format.
No options keys are supported at this time.
If colorspace is nil, we use generic RGB colorspace.
Available on macOS 10.13 or later.

4.5.18   JPEGRepresentationOfImage(Image as CIImageMBS, colorSpace as CG-ColorSpaceMBS = nil, options as dictionary = nil) as MemoryBlock

Plugin Version: 17.3, Platform: macOS, Targets: All.

Function: Render a CIImage to JPEG data.
Example:

dim f as FolderItem = SpecialFolder.Desktop.Child("test.png")
dim i as new CIImageMBS(f)
dim c as new CIContextMBS

dim jpegData as MemoryBlock = c.JPEGRepresentationOfImage(i)

Break // see debugger

Notes: Image must have a finite non-empty extent.
The CGColorSpace must be kCGColorSpaceModelRGB or kCGColorSpaceModelMonochrome.
Supported options keys are kCGImageDestinationLossyCompressionQuality, kCIImageRepresentationAVDepthData, kCIImageRepresentationDepthImage, kCIImageRepresentationDisparityImage.
If colorspace is nil, we use generic RGB colorspace.
Available on macOS 10.12 or later.

4.5.19   kCIContextCacheIntermediates as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the keys that may be passed in the dictionary while creating contexts.
Notes: A boolean NSNumber controlling how intermediate buffers are cached.
If false, the context will empty intermediates during and after renders.
The default value is true.

4.5.20   kCIContextHighQualityDownsample as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the option keys.
Notes: A boolean controlling the quality of affine downsample operations.
True imply that more quality is desired.
On iOS the the default value is false.
On OSX the the default value is true.

4.5.21   kCIContextOutputColorSpace as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: A key for the color space to use for images before they are rendered to the context.
Notes: By default, Core Image uses the GenericRGB color space, which leaves color matching to the system. You can specify a different output color space by providing a Quartz 2D CGColorSpace object (CG-ColorSpaceRef). (See Quartz 2D Programming Guide for information on creating and using CGColorSpace objects.)

To request that Core Image perform no color management, specify the NSNull object as the value for this key. Use this option for images that don‚Äôt contain color data (such as elevation maps, normal vector maps, and sampled function tables).

Available in OS X v10.6 and later.

4.5.22   kCIContextOutputPremultiplied as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the keys that may be passed in the dictionary while creating contexts.
Notes: A boolean controlling whether output renders produce alpha-premultiplied pixels.
The default value is true.

4.5.23   kCIContextPriorityRequestLow as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the keys that may be passed in the dictionary while creating contexts.
Notes: An number with a boolean value. When @YES the context will use low priority rendering on the GPU.

4.5.24   kCIContextUseSoftwareRenderer as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: A key for enabling software renderer use. If the associated NSNumber object is true, then the software renderer is required.
Notes: Available in OS X v10.6 and later.

4.5.25   kCIContextWorkingColorSpace as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: A key for the color space to use for image operations.
Notes: By default, Core Image assumes that processing nodes are 128 bits-per-pixel, linear light, premultiplied RGBA floating-point values that use the GenericRGB color space. You can specify a different working color space by providing a Quartz 2D CGColorSpace object (CGColorSpaceRef). Note that the working color space must be RGB-based. If you have YUV data as input (or other data that is not RGB-based), you can use ColorSync functions to convert to the working color space. (See Quartz 2D Programming Guide for information on creating and using CGColorSpace objects.)

To request that Core Image perform no color management, specify the NSNull object as the value for this key. Use this option for images that don‚Äôt contain color data (such as elevation maps, normal vector maps, and sampled function tables).

Available in OS X v10.6 and later.

4.5.26   kCIContextWorkingFormat as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: An option for the color format to use for intermediate results when rendering with the context.
Notes: The value for this key is an NSNumber object containing a CIFormat value. The default working format is kCIFormatRGBA8 for CPU rendering and kCIFormatRGBAf for GPU rendering. GPU rendering also supports the kCIFormatRGBAh format for greater color precision, but this format requires twice as

much memory and can be used only with color management enabled.

Available in OS X v10.4 and later.

4.5.27 kCIImageRepresentationAVDepthData as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the representation name.
Notes: For the raw depth data.

4.5.28 kCIImageRepresentationDepthImage as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the representation name.
Notes: For the depth image.

4.5.29 kCIImageRepresentationDisparityImage as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the representation name.
Notes: For the disparity image.

4.5.30 PNGRepresentationOfImage(Image as CIImageMBS, format as Integer = 24, colorSpace as CGColorSpaceMBS = nil, options as dictionary = nil) as MemoryBlock

Plugin Version: 17.3, Platform: macOS, Targets: All.

Function: Render a CIImage to PNG data.
Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.png")
dim i as new CIImageMBS(f)
dim c as new CIContextMBS

dim pngData as MemoryBlock = c.PNGRepresentationOfImage(i)

Break // see debugger
```

Notes: Image must have a finite non-empty extent.
The CGColorSpace must be kCGColorSpaceModelRGB or kCGColorSpaceModelMonochrome and must match the specified format.
No options keys are supported at this time.
If colorspace is nil, we use generic RGB colorspace.
Available on macOS 10.13 or later.

4.5.31   ReclaimResources

Plugin Version: 7.3, Platform: macOS, Targets: Desktop, Console & Web.

Function: Frees temporary memory.
Notes: Runs the context's garbage collector to reclaim any resources that are no longer required (e.g. removes textures from the texture cache that reference deleted images.) This method is called automatically after every rendering operation.

4.5.32   TIFFRepresentationOfImage(Image as CIImageMBS, format as Integer = 24, colorSpace as CGColorSpaceMBS = nil, options as dictionary = nil) as MemoryBlock

Plugin Version: 17.3, Platform: macOS, Targets: All.

Function: Render a CIImage to TIFF data.
Example:

dim f as FolderItem = SpecialFolder.Desktop.Child("test.png")
dim i as new CIImageMBS(f)
dim c as new CIContextMBS

dim tiffData as MemoryBlock = c.TIFFRepresentationOfImage(i)

Break // see debugger

Notes: Image must have a finite non-empty extent.
The CGColorSpace must be kCGColorSpaceModelRGB or kCGColorSpaceModelMonochrome and must match the specified format.
No options keys are supported at this time.
If colorspace is nil, we use generic RGB colorspace.
Available on macOS 10.12 or later.

4.5.33 writeHEIFRepresentationOfImage(Image as CIImageMBS, file as FolderItem, format as Integer = 24, colorSpace as CGColorSpaceMBS = nil, options as dictionary = nil, byref error as NSErrorMBS) as Boolean

Plugin Version: 19.2, Platform: macOS, Targets: All.

Function: Render a CIImage to HEIF file.
Example:

Dim f As FolderItem = SpecialFolder.Desktop.Child("test.jpg")
Dim i As New CIImageMBS(f)
Dim c As New CIContextMBS
Dim d As FolderItem = SpecialFolder.Desktop.Child("output.heif")

Dim e As NSErrorMBS
Dim b As Boolean = c.writePNGRepresentationOfImage(i, d, e)
If b Then
MsgBox "OK"
Else
MsgBox "Failed"+EndOfLine+e.LocalizedDescription
End If

Notes: Image must have a finite non-empty extent.
The CGColorSpace must be kCGColorSpaceModelRGB or kCGColorSpaceModelMonochrome and must match the specified format.
No options keys are supported at this time.
If colorspace is nil, we use generic RGB colorspace.
Available on macOS 10.13 or later.

4.5.34 writeJPEGRepresentationOfImage(Image as CIImageMBS, file as FolderItem, colorSpace as CGColorSpaceMBS = nil, options as dictionary = nil, byref error as NSErrorMBS) as Boolean

Plugin Version: 17.3, Platform: macOS, Targets: All.

Function: Render a CIImage to JPEG file.
Example:

dim f as FolderItem = SpecialFolder.Desktop.Child("test.png")
dim i as new CIImageMBS(f)
dim c as new CIContextMBS
dim d as FolderItem = SpecialFolder.Desktop.Child("output.jpg")

dim e as NSErrorMBS
dim b as Boolean = c.writeJPEGRepresentationOfImage(i, d, e)

if b then
MsgBox "OK"
else
MsgBox "Failed"+EndOfLine+e.LocalizedDescription
end if

Notes: Image must have a finite non-empty extent.
The CGColorSpace must be kCGColorSpaceModelRGB or kCGColorSpaceModelMonochrome.
Supported options keys are kCGImageDestinationLossyCompressionQuality, kCIImageRepresentationAVDepthData, kCIImageRepresentationDepthImage, kCIImageRepresentationDisparityImage.
If colorspace is nil, we use generic RGB colorspace.
Available on macOS 10.12 or later.

4.5.35 writePNGRepresentationOfImage(Image as CIImageMBS, file as FolderItem, format as Integer = 24, colorSpace as CGColorSpaceMBS = nil, options as dictionary = nil, byref error as NSErrorMBS) as Boolean

Plugin Version: 17.3, Platform: macOS, Targets: All.

Function: Render a CIImage to PNG file.
Example:

dim f as FolderItem = SpecialFolder.Desktop.Child("test.png")
dim i as new CIImageMBS(f)
dim c as new CIContextMBS
dim d as FolderItem = SpecialFolder.Desktop.Child("output.png")

dim e as NSErrorMBS
dim b as Boolean = c.writePNGRepresentationOfImage(i, d, e)
if b then
MsgBox "OK"
else
MsgBox "Failed"+EndOfLine+e.LocalizedDescription
end if

Notes: Image must have a finite non-empty extent.
The CGColorSpace must be kCGColorSpaceModelRGB or kCGColorSpaceModelMonochrome and must match the specified format.
No options keys are supported at this time.
If colorspace is nil, we use generic RGB colorspace.
Available on macOS 10.13 or later.

4.5.36 writeTIFFRepresentationOfImage(Image as CIImageMBS, file as FolderItem, format as Integer = 24, colorSpace as CGColorSpaceMBS = nil, options as dictionary = nil, byref error as NSErrorMBS) as Boolean

Plugin Version: 17.3, Platform: macOS, Targets: All.

Function: Render a CIImage to TIFF file.
Example:

dim f as FolderItem = SpecialFolder.Desktop.Child("test.png")
dim i as new CIImageMBS(f)
dim c as new CIContextMBS
dim d as FolderItem = SpecialFolder.Desktop.Child("output.tif")

dim e as NSErrorMBS
dim b as Boolean = c.writeTIFFRepresentationOfImage(i, d, e)
if b then
MsgBox "OK"
else
MsgBox "Failed"+EndOfLine+e.LocalizedDescription
end if

Notes: Image must have a finite non-empty extent.
The CGColorSpace must be kCGColorSpaceModelRGB or kCGColorSpaceModelMonochrome and must match the specified format.
No options keys are supported at this time.
If colorspace is nil, we use generic RGB colorspace.
Available on macOS 10.12 or later.

4.5.37 Properties

4.5.38 CGContext as CGContextMBS

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: The CGContextMBS targeted by this CIContext.
Notes: (Read and Write property)

4.5.39 description as String

Plugin Version: 9.7, Platform: macOS, Targets: All.

Function: Returns the textual description for this context.

Notes: (Read only property)

4.5.40   Handle as Integer

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: The handle to the CIContext object used internally.
Notes: (Read only property)

4.5.41   Picture as Picture

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: The picture used in the constructor (if any).
Notes: (Read and Write property)

4.5.42   Constants

Formats

Constant	Value	Description
kCIFormatA16	4	Alpha with 16-bit.
		Available in macOS 10.11 or newer.
kCIFormatA8	3	Alpha with 8-bit.
		Available in macOS 10.11 or newer.
kCIFormatABGR8	46	ABGR with 8-bit.
		Available in macOS 10.11 or newer.
kCIFormatAf	6	Alpha with float values.
		Available in macOS 10.11 or newer.
kCIFormatAh	5	Alpha with half floating point.
		Available in macOS 10.11 or newer.
kCIFormatARGB8	23	ARGB with 8-bit.
kCIFormatBGRA8	22	BGRA with 8-bit.
kCIFormatR16	37	Red with 16-bit.
		Available in macOS 10.11 or newer.
kCIFormatR8	36	Red with 8-bit.
		Available in macOS 10.11 or newer.
kCIFormatRf	39	Red with floating point.
		Available in macOS 10.11 or newer.
kCIFormatRG16	41	Red and green with 16-bit.
		Available in macOS 10.11 or newer.
kCIFormatRG8	40	Red and green with 8-bit.
		Available in macOS 10.11 or newer.
kCIFormatRGBA16	27	RGBA with 16-bit.
kCIFormatRGBA8	24	RGBA with 8-bit.
kCIFormatRGBAf	34	RGBA with floating point.
kCIFormatRGBAh	31	RGBA values that are IEEE 754-2008 half float compliant.
kCIFormatRGf	43	Red and green with floating point values.
		Available in macOS 10.11 or newer.
kCIFormatRGh	42	Red and green with half precision floating point values.
		Available in macOS 10.11 or newer.
kCIFormatRh	38	Red with half precision floating point.
		Available in macOS 10.11 or newer.

4.6   class CIDataMatrixCodeDescriptorMBS

4.6.1   class CIDataMatrixCodeDescriptorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: CIDataMatrixCodeDescriptor is a concrete subclass of CIBarcodeDescriptor that defines an abstract representation of a Data Matrix code symbol.
Notes: Subclass of the CIBarcodeDescriptorMBS class.

4.6.2   Methods

4.6.3   Constructor(errorCorrectedPayload as MemoryBlock, rowCount as Integer, columnCount as Integer, eccVersion as integer)

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Initializes a descriptor that can be used as input to CIBarcodeGenerator.

4.6.4   descriptorWithPayload(errorCorrectedPayload as MemoryBlock, rowCount as Integer, columnCount as Integer, eccVersion as integer) as CIDataMatrixCodeDescriptorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Construct a descriptor that can be used as input to CIBarcodeGenerator.

4.6.5   Properties

4.6.6   columnCount as Integer

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The number of module columns.
Notes: Refer to ISO/IEC 16022:2006(E) for valid module row and column count combinations.
(Read only property)

4.6.7   eccVersion as Integer

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Data Matrix code ECC version.
Notes: Valid values are 000, 050, 080, 100, 140, and 200. Any symbol with an even number of rows and columns will be ECC 200.

ECC 000 - 140 symbols offer five levels of error correction using convolutional code error correction. Each successive level of error correction offers more protection for the message data and increases the size of the symbol required to carry a specific message. ECC 000 symbols offer no data protection. The other modes are described in ISO/IEC 16022:2006 and enumerated in this list only for completeness.

ECC 200 symbols utilize Reed-Solomon error correction. The error correction capacity for any given Data Matrix symbol is fixed by the size (in rows and columns) of the symbol. See Table 7 of ISO/IEC 16022:2006(E) for more details.
(Read only property)

4.6.8 errorCorrectedPayload as MemoryBlock

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The error corrected payload that comprise the Data Matrix code symbol.
Notes: DataMatrix symbols are specified bn ISO/IEC 16022:2006(E). ECC 200-type symbols will always have an even number of rows and columns.

For ECC 200-type symbols, the phases of encoding data into a symbol are described in section 5.1 – Encode procedure overview. The error corrected payload comprises the de-interleaved bits of the message described at the end of Step 1: Data encodation.
(Read only property)

4.6.9 rowCount as Integer

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The number of module rows.
Notes: Refer to ISO/IEC 16022:2006(E) for valid module row and column count combinations.
(Read only property)

4.6.10 Constants

ECC Versions

Constant	Value	Description
ECCVersion000	0	Indicates error correction using convolutional code error correction with no data protection.
ECCVersion050	50	Indicates 1/4 of the symbol is dedicated to convolutional code error correction.
ECCVersion080	80	Indicates 1/3 of the symbol is dedicated to convolutional code error correction.
ECCVersion100	100	Indicates 1/2 of the symbol is dedicated to convolutional code error correction.
ECCVersion140	140	Indicates 3/4 of the symbol is dedicated to convolutional code error correction.
ECCVersion200	200	Indicates error correction using Reed-Solomon error correction. Data protection overhead varies based on symbol size.

4.7 class CIDetectorMBS

4.7.1 class CIDetectorMBS

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: The Core Image class to detect features in images.
Notes: This class potentially holds onto a lot of state. Hence it may be beneficial from a performance perspective to re-use the same CIDetector instance. Specifying a CIContext when creating a detector may have an impact on performance since this context may be used when analyzing an image.
Blog Entries

- MonkeyBread Software Releases the MBS Xojo Plugins in version 18.4

- MBS Xojo Plugins, version 18.4pr6

- Live barcode detection with Xojo for MacOS

- MBS Xojo Plugins, version 17.3pr1

- MBS Xojo / Real Studio Plugins, version 16.0pr5

- MonkeyBread Software Releases the MBS Real Studio plug-ins in version 12.4

- MBS Real Studio Plugins, version 12.4pr7

- New plugin class for CIDetector

Videos

- Presentation from Munich conference about MBS Plugins.

- Presentation from Xojo Developer Conference 2019 in Miami.

Xojo Developer Magazine

- 17.1, page 11: News

- 16.6, page 9: News

4.7.2 Methods

4.7.3 CIDetectorAccuracy as string

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: The key in the options dictionary used to specify a accuracy / performance tradeoff to be used.

4.7.4 CIDetectorAccuracyHigh as string

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: One of the values for use with the CIDetectorAccuracy key.
Notes: Lower performance, higher accuracy

4.7.5 CIDetectorAccuracyLow as string

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: One of the values for use with the CIDetectorAccuracy key.
Notes: Lower accuracy, higher performance

4.7.6 CIDetectorAspectRatio as string

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the keys used in the options dictionary for featuresInImage.
Notes: An option specifying the aspect ratio (width divided by height) of rectangles to search for.

The value of this key is an NSNumber object whose value is a positive floating-point number. Use this option with the CIDetectorTypeRectangle detector type to fine-tune the accuracy of the detector. For example, to more accurately find a business card (3.5 x 2 inches) in an image, specify an aspect ratio of 1.75 (3.5 / 2).

4.7.7 CIDetectorEyeBlink as string

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: An option for whether Core Image will perform additional processing to recognize closed eyes in detected faces.
Notes: Available in OS X v10.9 and later.

4.7.8 CIDetectorFocalLength as string

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the keys used in the options dictionary for featuresInImage.
Notes: An option identifying the focal length used in capturing images to be processed by the detector.

The value of this key is an NSNumber object whose value is a floating-point number between -1.0 and 1.0. Use this option with the CIDetectorTypeRectangle detector type to fine-tune the accuracy of the detector.

4.7.9 CIDetectorImageOrientation as string

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: An option for the display orientation of the image whose features you want to detect.
Notes: The value of this key is an NSNumber object whose value is an integer between 1 and 8. The TIFF and EXIF specifications define these values to indicate where the pixel coordinate origin (0,0) of the image should appear when it is displayed. The default value is 1, indicating that the origin is in the top left corner of the image. For further details, see kCGImagePropertyOrientation.
Core Image only detects faces whose orientation matches that of the image. You should provide a value for this key if you want to detect faces in a different orientation.
Available in OS X v10.8 and later.

4.7.10 CIDetectorMaxFeatureCount as string

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for featuresInImage.
Notes: For rectangle detector, the value for this key is an integer number from 1 ... 256 that represents the maximum number of features to return.
valid value range: $1 <=$ CIDetectorMaxFeatureCount $<= 256$. The default value is 1.

4.7.11 CIDetectorMinFeatureSize as string

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: A key used to specify the minimum size that the detector will recognize as a feature.
Notes: The value for this key is an NSNumber object ranging from 0.0 through 1.0 that represents a fraction of the minor dimension of the image.
Available in OS X v10.8 and later.

4.7.12 CIDetectorNumberOfAngles as string

Plugin Version: 15.4, Platform: macOS, Targets: All.

Function: One of the configuration keys.
Notes: The number of perspectives to use for detecting a face in video input.

The value for this key is a number 1, 3, 5, 7, 9, or 11. At higher numbers of angles, face detection in video becomes more accurate, but at a higher computational cost.

Available in OS X 10.11 and later.

4.7.13   CIDetectorReturnSubFeatures as string

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for featuresInImage.
Notes: The value for this key is a bool. Controls whether the text detector should detect subfeatures or not. The default value is false. Requires 64-bit.

4.7.14   CIDetectorSmile as string

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: An option for whether Core Image will perform additional processing to recognize smiles in detected faces.
Notes: Available in OS X v10.9 and later.

4.7.15   CIDetectorTracking as string

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: A key used to enable or disable face tracking for the detector.
Notes: Use this option when you want to track faces across frames in a video.
Available in OS X v10.8 and later.

4.7.16   CIDetectorTypeFace as string

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Specifies a detector type for face recognition.

4.7.17   CIDetectorTypeQRCode as string

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the strings used to declare the detector for which you are interested.
Notes: A detector that searches for Quick Response codes (a type of 2D barcode) in a still image or video, returning CIQRCodeFeature objects that provide information about detected barcodes.
This is Mac 64-bit only.

4.7.18 CIDetectorTypeRectangle as string

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the strings used to declare the detector for which you are interested.
Notes: A detector that searches for rectangular areas in a still image or video, returning CIRectangleFeature objects that provide information about detected regions.

The rectangle detector finds areas that are likely to represent rectangular objects that appear in perspective in the image, such as papers or books seen on a desktop.

4.7.19 CIDetectorTypeText as string

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the strings used to declare the detector for which you are interested.
Notes: A detector that searches for text in a still image or video, returning CITextFeature objects that provide information about detected regions.

The text detector finds areas that are likely to contain upright text, but does not perform optical character recognition.

4.7.20 Constructor(Handle as Integer)

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Creates a new CIDetectorMBS object for the given handle.
See also:

4.7.21 Constructor(type as string, context as CIContextMBS = nil, options as dictionary = nil)

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Returns a new detector instance of the given type.
Notes: The type is used to specify the usage intent.
The context argument specifies the CIContext to be used to operate on the image. May be nil.

If the input image to featuresInImage is the output of a CoreImage operation, it may improve performance to specify the same context that was used to operate on that image.

The detector may do image processing in this context and if the image is on the GPU and the specified context is a GPU context this may avoid additional upload to / download from the GPU. If the input image is on the CPU (or the output from a CPU based context) specifying a GPU based context (or vice versa) may reduce performance.

The options parameter lets you optinally specify a accuracy / performance tradeoff. Can be nil or an empty dictionary.
See also:

4.7.22   detectorOfType(type as string, context as CIContextMBS = nil, options as dictionary = nil) as CIDetectorMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Returns a new detector instance of the given type.
Notes: The type is used to specify the usage intent.
The context argument specifies the CIContext to be used to operate on the image. May be nil.

If the input image to featuresInImage is the output of a CoreImage operation, it may improve performance to specify the same context that was used to operate on that image.

The detector may do image processing in this context and if the image is on the GPU and the specified context is a GPU context this may avoid additional upload to / download from the GPU. If the input image is on the CPU (or the output from a CPU based context) specifying a GPU based context (or vice versa) may reduce performance.

The options parameter lets you optinally specify a accuracy / performance tradeoff. Can be nil or an empty dictionary.

4.7.23   featuresInImage(image as CIImageMBS) as CIFeatureMBS()

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Returns an array of CIFeature instances in the given image.
Notes: The array is sorted by confidence, highest confidence first.
See also:

4.7.24 featuresInImage(image as CIImageMBS, options as dictionary) as CIFeatureMBS()

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Returns an array of CIFeature instances in the given image.
Notes: The array is sorted by confidence, highest confidence first.
The options dictionary can contain a CIDetectorImageOrientation key value.
See also:

4.7.25 Properties

4.7.26 Handle as Integer

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: The internal object reference.
Notes: (Read only property)

4.8   class CIFaceFeatureMBS

4.8.1   class CIFaceFeatureMBS

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: A CIFaceFeature object describes a face detected in a picture.
Notes: Its properties provide locations for the face's eyes and mouth.
All positions are relative to the original image.
Subclass of the CIFeatureMBS class.
Blog Entries

- MBS Real Studio Plugins, version 12.4pr7

4.8.2   Methods

4.8.3   Constructor(Handle as Integer)

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Creates a new CIFaceFeature object from a handle value.

4.8.4   Properties

4.8.5   faceAngle as Double

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: The rotation of the face. (read-only)
Notes: Rotation is measured counterclockwise in radians, with zero indicating that a line drawn between the eyes is horizontal relative to the image orientation.

Available in OS X v10.9 and later.
(Read only property)

4.8.6   hasFaceAngle as boolean

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: A Boolean value that indicates whether information about face rotation is available. (read-only)
Notes: Available in OS X v10.9 and later.
(Read only property)

4.8.7 hasLeftEyePosition as boolean

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: A Boolean that indicates whether the detector found the face's left eye. (read-only)
Notes: (Read only property)

4.8.8 hasMouthPosition as boolean

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: A Boolean that indicates whether the detector found the face's mouth. (read-only)
Notes: (Read only property)

4.8.9 hasRightEyePosition as boolean

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: A Boolean that indicates whether the detector found the face's right eye. (read-only)
Notes: (Read only property)

4.8.10 hasSmile as boolean

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: A Boolean value that indicates whether a smile is detected in the face. (read-only)
Notes: Available in OS X v10.9 and later.
For smiles to be detected, the key CIDetectorSmile must be present with a value of true in the dictionary
passed to a detector's featuresInImage method.
(Read only property)

4.8.11 hasTrackingFrameCount as boolean

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Whether there is a tracking frame count.
Notes: (Read only property)

4.8.12 hasTrackingID as boolean

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Whether the tracking ID is set.
Notes: (Read only property)

4.8.13 leftEyeClosed as boolean

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: A Boolean value that indicates whether the a closed left eye is detected in the face. (read-only)
Notes: "Left" is relative to the original (non-mirrored) image orientation, not to the owner of the eye.

For closed eyes to be detected, the key CIDetectorEyeBlink must be present with a value of true in the dictionary passed to a detector's featuresInImage method.
Available in OS X v10.9 and later.
(Read only property)

4.8.14 leftEyePosition as CGPointMBS

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: The coordinates of the left eye, in image coordinates. (read-only)
Notes: (Read only property)

4.8.15 mouthPosition as CGPointMBS

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: The coordinates of the mouth eye, in image coordinates (read-only)
Notes: (Read only property)

4.8.16 rightEyeClosed as boolean

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: A Boolean value that indicates whether the a closed left eye is detected in the face. (read-only)
Notes: "Right" is relative to the original (non-mirrored) image orientation, not to the owner of the eye.

For closed eyes to be detected, the key CIDetectorEyeBlink must be present with a value of true in the dictionary passed to a detector's featuresInImage method.
Available in OS X v10.9 and later.
(Read only property)

4.8.17 rightEyePosition as CGPointMBS

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: The coordinates of the right eye, in image coordinates (read-only)
Notes: (Read only property)

4.8.18 trackingFrameCount as Integer

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: The tracking frame count.
Notes: (Read only property)

4.8.19 trackingID as Integer

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: The tracking ID.
Notes: (Read only property)

4.9   class CIFeatureMBS

4.9.1   class CIFeatureMBS

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Generic feature found by a CIDetector.
Blog Entries

- MBS Real Studio Plugins, version 12.4pr7

4.9.2   Methods

4.9.3   CIFeatureTypeFace as string

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: One of the keys that define specific kinds of findable features.
Notes: The discovered feature is a person‚Äôs face.
Use the CIFaceFeatureMBS class to find more information about the detected feature.
Available in OS X v10.7 and later.

4.9.4   CIFeatureTypeQRCode as string

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the keys that define specific kinds of findable features.
Notes: The discovered feature is a Quick Response code (2D barcode).
Use the CIQRCodeFeature class to find more information about the detected feature.
Available in OS X v10.11 and later.

4.9.5   CIFeatureTypeRectangle as string

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the keys that define specific kinds of findable features.
Notes: The discovered feature is a rectangular object, though it might appear in perspective in the image.
Use the CIRectangleFeatureMBS class to find more information about the detected feature.
Available in OS X v10.10 and later.

4.9.6 CIFeatureTypeText as string

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the keys that define specific kinds of findable features.
Notes: The discovered feature is a region likely to contain upright text.
Use the CITextFeature class to find more information about the detected feature.
Available in OS X v10.11 and later.

4.9.7 Constructor(Handle as Integer)

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Creates a new CIFeature object from a handle value.

4.9.8 Properties

4.9.9 bounds as CGRectMBS

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: The bounds of the feature in the image it was detected in.
Notes: (Read only property)

4.9.10 Handle as Integer

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: The internal object reference.
Notes: (Read only property)

4.9.11 type as string

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: The type of the feature.
Notes: (Read only property)

4.10   class CIFilterAccordionFoldTransitionMBS

4.10.1   class CIFilterAccordionFoldTransitionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Accordion Fold Transition filter.
Notes: Details for this filter:

FilterName:	CIAccordionFoldTransition
DisplayName English:	Accordion Fold Transition
DisplayName German:	Leporello-√úbergang
DisplayName French:	Transition de type accord√©on
DisplayName Italian:	Transizione foglio a fisarmonica
DisplayName Spanish:	Transici√n con pliegues a modo de acorde√n

Categories:

- CICategoryTransition: Transition

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTargetImage: Target Image

- inputBottomHeight: Bottom Height

- inputNumberOfFolds: Number of Folds

- inputFoldShadowAmount: Fold Shadow Amount

- inputTime: Time

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.10.2   Methods

4.10.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.10.4   Properties

4.10.5   AttributeinputBottomHeight as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Accordion Fold Transition attribute.
Notes: This attribute should have this content:

Name:	inputBottomHeight
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Bottom Height
DisplayName German:	Abstand unten
DisplayName French:	Hauteur du bas
DisplayName Italian:	Altezza inferiore
DisplayName Spanish:	Altura inferior
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.10.6   AttributeinputFoldShadowAmount as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Accordion Fold Transition attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputFoldShadowAmount
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Fold Shadow Amount
DisplayName German:	Faltschattenumfang
DisplayName French:	Degr√© d‚Äôombre des plis
DisplayName Italian:	Quantit√† d‚Äôombreggiatura
DisplayName Spanish:	Cantidad de sombreado por doblado
DefaultNumber:	0.1
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.10.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Accordion Fold Transition attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.10.8   AttributeinputNumberOfFolds as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Accordion Fold Transition attribute.
Notes: This attribute should have this content:

Name:	inputNumberOfFolds
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Number of Folds
DisplayName German:	Anzahl der Falzungen:
DisplayName French:	Nombre de plis
DisplayName Italian:	Numero di campi
DisplayName Spanish:	N√mero de dobleces
DefaultNumber:	3
IdentityNumber:	0
MaxNumber:	50
MinNumber:	1
SliderMaxNumber:	10
SliderMinNumber:	1

(Read only property)

4.10.9   AttributeinputTargetImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Accordion Fold Transition attribute.
Notes: This attribute should have this content:

Name:	inputTargetImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.10.10   AttributeinputTime as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Accordion Fold Transition attribute.
Notes: This attribute should have this content:

Name:	inputTime
Class:	double
Type:	CIAttributeTypeTime
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.10.11 inputBottomHeight as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bottom Height
Notes:

Name:	inputBottomHeight
Class:	double (NSNumber)
DisplayName English:	Bottom Height
DisplayName German:	Abstand unten
DisplayName French:	Hauteur du bas
DisplayName Italian:	Altezza inferiore
DisplayName Spanish:	Altura inferior
Type:	CIAttributeTypeDistance

See AttributeinputBottomHeight for more details.
(Read and Write property)

4.10.12 inputFoldShadowAmount as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Fold Shadow Amount
Notes:

Name:	inputFoldShadowAmount
Class:	double (NSNumber)
DisplayName English:	Fold Shadow Amount
DisplayName German:	Faltschattenumfang
DisplayName French:	Degr√© d‚Äôombre des plis
DisplayName Italian:	Quantit√† d‚Äôombreggiatura
DisplayName Spanish:	Cantidad de sombreado por doblado
Type:	CIAttributeTypeScalar

See AttributeinputFoldShadowAmount for more details.
(Read and Write property)

4.10.13   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.10.14   inputNumberOfFolds as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Number of Folds
Notes:

See AttributeinputNumberOfFolds for more details.
(Read and Write property)

Name:	inputNumberOfFolds
Class:	double (NSNumber)
DisplayName English:	Number of Folds
DisplayName German:	Anzahl der Falzungen:
DisplayName French:	Nombre de plis
DisplayName Italian:	Numero di campi
DisplayName Spanish:	N√mero de dobleces
Type:	CIAttributeTypeScalar

4.10.15   inputTargetImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Target Image
Notes:

Name:	inputTargetImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
Type:	CIAttributeTypeImage

See AttributeinputTargetImage for more details.
(Read and Write property)

4.10.16   inputTime as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Time
Notes:

Name:	inputTime
Class:	double (NSNumber)
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
Type:	CIAttributeTypeTime

See AttributeinputTime for more details.
(Read and Write property)

4.11   class CIFilterAdditionCompositingMBS

4.11.1   class CIFilterAdditionCompositingMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Addition filter.
Notes: Details for this filter:

FilterName:	CIAdditionCompositing
DisplayName English:	Addition
DisplayName German:	Addition
DisplayName French:	Addition
DisplayName Italian:	Aggiunta
DisplayName Spanish:	Adici√n

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.11.2 Methods

4.11.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.11.4 Properties

4.11.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Addition attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.11.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Addition attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.11.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.11.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.12   class CIFilterAffineClampMBS

4.12.1   class CIFilterAffineClampMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Affine Clamp filter.
Notes: Details for this filter:

FilterName:	CIAffineClamp
DisplayName English:	Affine Clamp
DisplayName German:	Rand erweitern
DisplayName French:	Attache affine
DisplayName Italian:	Distanza affine
DisplayName Spanish:	Fijaci√n af√n

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTransform: Transform

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.12.2 Methods

4.12.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.12.4 Properties

4.12.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Affine Clamp attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.12.6 AttributeinputTransform as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Affine Clamp attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputTransform
Class:	NSAffineTransformMBS
Type:	CIAttributeTypeTransform
DisplayName English:	Transform
DisplayName German:	Transformation
DisplayName French:	Transformer
DisplayName Italian:	Trasforma
DisplayName Spanish:	Transformaci√n
DefaultAffineTransform:	[0.4, 0, 0, 0.4, 0, 0]
IdentityAffineTransform:	[1, 0, 0, 1, 0, 0]

4.12.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.12.8   inputTransform as NSAffineTransformMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Transform
Notes:

See AttributeinputTransform for more details.
(Read and Write property)

Name:	inputTransform
Class:	NSAffineTransformMBS (NSAffineTransform)
DisplayName English:	Transform
DisplayName German:	Transformation
DisplayName French:	Transformer
DisplayName Italian:	Trasforma
DisplayName Spanish:	Transformaci√n
Type:	CIAttributeTypeTransform

4.13   class CIFilterAffineTileMBS

4.13.1   class CIFilterAffineTileMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Affine Tile filter.
Notes: Details for this filter:

FilterName:	CIAffineTile
DisplayName English:	Affine Tile
DisplayName German:	Affin kacheln
DisplayName French:	Mosa√Øque affine
DisplayName Italian:	Mosaico affine
DisplayName Spanish:	Mosaico af√n

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTransform: Transform

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.13.2   Methods

4.13.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.13.4   Properties

4.13.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Affine Tile attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.13.6   AttributeinputTransform as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Affine Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputTransform
Class:	NSAffineTransformMBS
Type:	CIAttributeTypeTransform
DisplayName English:	Transform
DisplayName German:	Transformation
DisplayName French:	Transformer
DisplayName Italian:	Trasforma
DisplayName Spanish:	Transformaci√n
DefaultAffineTransform:	[0.4, 0, 0, 0.4, 0, 0]
IdentityAffineTransform:	[1, 0, 0, 1, 0, 0]

4.13.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.13.8   inputTransform as NSAffineTransformMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Transform
Notes:

See AttributeinputTransform for more details.
(Read and Write property)

Name:	inputTransform
Class:	NSAffineTransformMBS (NSAffineTransform)
DisplayName English:	Transform
DisplayName German:	Transformation
DisplayName French:	Transformer
DisplayName Italian:	Trasforma
DisplayName Spanish:	Transformaci√n
Type:	CIAttributeTypeTransform

4.14   class CIFilterAffineTransformMBS

4.14.1   class CIFilterAffineTransformMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Affine Transform filter.
Example:

// Rotate image with CoreImage

// load image
dim f as FolderItem = SpecialFolder.Desktop.Child("test.png")
dim image as new CIImageMBS(f)

// rotate 45 degree
dim n as new NSAffineTransformMBS
n.rotateByDegrees(45)

dim TransformFilter as new CIFilterAffineTransformMBS
TransformFilter.inputImage = image
TransformFilter.inputTransform = n

// get result
dim resultImage as CIImageMBS = TransformFilter.outputImage

// for saving to file
dim outputImage as NSImageMBS = resultImage.RenderNSImage(false)

f = SpecialFolder.Desktop.Child("output.png")
dim b as BinaryStream = BinaryStream.Create(f, true)
b.Write outputImage.PNGRepresentation

// as Real Studio picture object for display
dim pic as Picture = outputImage.CopyPictureWithMask

Backdrop = pic

Notes: Details for this filter:

Categories:

- CICategoryGeometryAdjustment: Geometry Adjustment

- CICategoryVideo: Video

FilterName:	CIAffineTransform
DisplayName English:	Affine Transform
DisplayName German:	Affin transformieren
DisplayName French:	Transformation affine
DisplayName Italian:	Trasformazione affine
DisplayName Spanish:	Transformaci√n af√n

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTransform: Transform

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- Tip of the day: Rotate image with CoreImage

4.14.2 Methods

4.14.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.14.4 Properties

4.14.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Affine Transform attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.14.6   AttributeinputTransform as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Affine Transform attribute.
Notes: This attribute should have this content:

Name:	inputTransform
Class:	NSAffineTransformMBS
Type:	CIAttributeTypeTransform
DisplayName English:	Transform
DisplayName German:	Transformation
DisplayName French:	Transformer
DisplayName Italian:	Trasforma
DisplayName Spanish:	Transformaci√n
DefaultAffineTransform:	[1, 0, 0, 1, 0, 0]
IdentityAffineTransform:	[1, 0, 0, 1, 0, 0]

(Read only property)

4.14.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.14.8   inputTransform as NSAffineTransformMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Transform
Example:

```
// Rotate image with CoreImage

// load image
dim f as FolderItem = SpecialFolder.Desktop.Child("test.png")
dim image as new CIImageMBS(f)

// rotate 45 degree
dim n as new NSAffineTransformMBS
n.rotateByDegrees(45)

dim TransformFilter as new CIFilterAffineTransformMBS
TransformFilter.inputImage = image
TransformFilter.inputTransform = n

// get result
dim resultImage as CIImageMBS = TransformFilter.outputImage

// for saving to file
dim outputImage as NSImageMBS = resultImage.RenderNSImage(false)

f = SpecialFolder.Desktop.Child("output.png")
dim b as BinaryStream = BinaryStream.Create(f, true)
b.Write outputImage.PNGRepresentation
```

// as Real Studio picture object for display
dim pic as Picture = outputImage.CopyPictureWithMask

Backdrop = pic

Notes:

Name:	inputTransform
Class:	NSAffineTransformMBS (NSAffineTransform)
DisplayName English:	Transform
DisplayName German:	Transformation
DisplayName French:	Transformer
DisplayName Italian:	Trasforma
DisplayName Spanish:	Transformaci√n
Type:	CIAttributeTypeTransform

See AttributeinputTransform for more details.
(Read and Write property)

4.15 class CIFilterAreaAverageMBS

4.15.1 class CIFilterAreaAverageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Area Average filter.
Notes: Details for this filter:

FilterName:	CIAreaAverage
DisplayName English:	Area Average
DisplayName German:	Bereichsdurchschnitt
DisplayName French:	Moyenne de la zone
DisplayName Italian:	Media area
DisplayName Spanish:	Media del √°rea

Categories:

- CICategoryReduction: Reduction

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputExtent: Extent

Output:

- outputImage

- outputImageNonMPS:

Subclass of the CIFilterMBS class.

4.15.2   Methods

4.15.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.15.4   Properties

4.15.5   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Average attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 640 80]
IdentityVector:	n/a

(Read only property)

4.15.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Average attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.15.7 inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.15.8 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.16   class CIFilterAreaHistogramMBS

4.16.1   class CIFilterAreaHistogramMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Area Histogram filter.
Notes: Details for this filter:

FilterName:	CIAreaHistogram
DisplayName English:	Area Histogram
DisplayName German:	Bereichs-Histogramm
DisplayName French:	Histogramme de la zone
DisplayName Italian:	Istogramma area
DisplayName Spanish:	Histograma del √°rea

Categories:

- CICategoryReduction: Reduction
- CICategoryVideo: Video
- CICategoryStillImage: Still Image
- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image
- inputExtent: Extent
- inputScale: Scale
- inputCount: Count

Output:

- outputImage
- outputData
- outputImageMPS
- outputImageNonMPS

Subclass of the CIFilterMBS class.

4.16.2   Methods

4.16.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.16.4   Properties

4.16.5   AttributeinputCount as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Histogram attribute.
Notes: This attribute should have this content:

Name:	inputCount
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Count
DisplayName German:	Anzahl
DisplayName French:	Compte
DisplayName Italian:	Conteggio
DisplayName Spanish:	Recuento
DefaultNumber:	64
IdentityNumber:	0
MaxNumber:	2048
MinNumber:	1
SliderMaxNumber:	1000
SliderMinNumber:	10

(Read only property)

4.16.6   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Histogram attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 640 80]
IdentityVector:	n/a

(Read only property)

4.16.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Histogram attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.16.8   AttributeinputScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Histogram attribute.
Notes: This attribute should have this content:

Name:	inputScale
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
DefaultNumber:	1
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.16.9   inputCount as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Count
Notes:

Name:	inputCount
Class:	double (NSNumber)
DisplayName English:	Count
DisplayName German:	Anzahl
DisplayName French:	Compte
DisplayName Italian:	Conteggio
DisplayName Spanish:	Recuento
Type:	CIAttributeTypeScalar

See AttributeinputCount for more details.
(Read and Write property)

4.16.10   inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

See AttributeinputExtent for more details.

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

(Read and Write property)

4.16.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.16.12   inputScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale
Notes:

See AttributeinputScale for more details.
(Read and Write property)

Name:	inputScale
Class:	double (NSNumber)
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
Type:	CIAttributeTypeScalar

4.17 class CIFilterAreaLogarithmicHistogramMBS

4.17.1 class CIFilterAreaLogarithmicHistogramMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Area Logarithmic Histogram filter.
Notes: Details for this filter:

FilterName:	CIAreaLogarithmicHistogram
DisplayName English:	Area Logarithmic Histogram
DisplayName German:	Logarithmisches Fl√§chenhistogramm
DisplayName French:	Histogramme logarithmique de la zone
DisplayName Italian:	Istogramma logaritmico area
DisplayName Spanish:	Histograma logar√tmico del √°rea

Categories:

- CICategoryReduction: Reduction

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputExtent: Extent

- inputScale: Scale

- inputCount: Count

- inputMinimumStop: Minimum Stop

- inputMaximumStop: Maximum Stop

Output:

- outputData

- outputImageMPS

- outputImageNonMPS

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.17.2   Methods

4.17.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.17.4   Properties

4.17.5   AttributeinputCount as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Area Logarithmic Histogram attribute.
Notes: This attribute should have this content:

Name:	inputCount
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Count
DisplayName German:	Anzahl
DisplayName French:	Compte
DisplayName Italian:	Conteggio
DisplayName Spanish:	Recuento
DefaultNumber:	64
IdentityNumber:	0
MaxNumber:	2048
MinNumber:	1
SliderMaxNumber:	1000
SliderMinNumber:	10

(Read only property)

4.17.6 AttributeinputExtent as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Area Logarithmic Histogram attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 640 80]
IdentityVector:	n/a

(Read only property)

4.17.7 AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Area Logarithmic Histogram attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.17.8   AttributeinputMaximumStop as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Area Logarithmic Histogram attribute.
Notes: This attribute should have this content:

Name:	inputMaximumStop
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Maximum Stop
DisplayName German:	Obere Grenze
DisplayName French:	Valeur maximale
DisplayName Italian:	Valore massimo
DisplayName Spanish:	Parada m√°xima
DefaultNumber:	4
IdentityNumber:	0
SliderMaxNumber:	8
SliderMinNumber:	0

(Read only property)

4.17.9   AttributeinputMinimumStop as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Area Logarithmic Histogram attribute.
Notes: This attribute should have this content:

(Read only property)

4.17.10   AttributeinputScale as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Area Logarithmic Histogram attribute.
Notes: This attribute should have this content:

Name:	inputMinimumStop
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Minimum Stop
DisplayName German:	Untere Grenze
DisplayName French:	Valeur minimale
DisplayName Italian:	Valore minimo
DisplayName Spanish:	Parada m√nima
DefaultNumber:	-10
IdentityNumber:	0
SliderMaxNumber:	-4
SliderMinNumber:	-12

Name:	inputScale
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
DefaultNumber:	1
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.17.11   inputCount as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Count
Notes:

See AttributeinputCount for more details.
(Read and Write property)

4.17.12   inputExtent as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Name:	inputCount
Class:	double (NSNumber)
DisplayName English:	Count
DisplayName German:	Anzahl
DisplayName French:	Compte
DisplayName Italian:	Conteggio
DisplayName Spanish:	Recuento
Type:	CIAttributeTypeScalar

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.17.13   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.17.14 inputMaximumStop as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Maximum Stop
Notes:

Name:	inputMaximumStop
Class:	double (NSNumber)
DisplayName English:	Maximum Stop
DisplayName German:	Obere Grenze
DisplayName French:	Valeur maximale
DisplayName Italian:	Valore massimo
DisplayName Spanish:	Parada m√°xima
Type:	CIAttributeTypeScalar

See AttributeinputMaximumStop for more details.
(Read and Write property)

4.17.15 inputMinimumStop as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Minimum Stop
Notes:

Name:	inputMinimumStop
Class:	double (NSNumber)
DisplayName English:	Minimum Stop
DisplayName German:	Untere Grenze
DisplayName French:	Valeur minimale
DisplayName Italian:	Valore minimo
DisplayName Spanish:	Parada m√nima
Type:	CIAttributeTypeScalar

See AttributeinputMinimumStop for more details.
(Read and Write property)

4.17.16 inputScale as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Scale
Notes:

Name:	inputScale
Class:	double (NSNumber)
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
Type:	CIAttributeTypeScalar

See AttributeinputScale for more details.
(Read and Write property)

4.18   class CIFilterAreaMaximumAlphaMBS

4.18.1   class CIFilterAreaMaximumAlphaMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Area Maximum Alpha filter.
Notes: Details for this filter:

FilterName:	CIAreaMaximumAlpha
DisplayName English:	Area Maximum Alpha
DisplayName German:	Bereichsmaximum im Alpha-Kanal
DisplayName French:	Alpha maximum de la zone
DisplayName Italian:	Alfa massimo area
DisplayName Spanish:	Alfa m√°ximo del √°rea

Categories:

- CICategoryReduction: Reduction

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputExtent: Extent

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.18.2   Methods

4.18.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.18.4   Properties

4.18.5   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Maximum Alpha attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 640 80]
IdentityVector:	n/a

(Read only property)

4.18.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Maximum Alpha attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.18.7   inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.18.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.19 class CIFilterAreaMaximumMBS

4.19.1 class CIFilterAreaMaximumMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Area Maximum filter.
Notes: Details for this filter:

FilterName:	CIAreaMaximum
DisplayName English:	Area Maximum
DisplayName German:	Bereichsmaximum
DisplayName French:	Maximum de la zone
DisplayName Italian:	Massimo area
DisplayName Spanish:	M√°ximo del √°rea

Categories:

- CICategoryReduction: Reduction

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputExtent: Extent

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.19.2   Methods

4.19.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.19.4   Properties

4.19.5   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Maximum attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 640 80]
IdentityVector:	n/a

(Read only property)

4.19.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Maximum attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.19.7   inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.19.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.20 class CIFilterAreaMinimumAlphaMBS

4.20.1 class CIFilterAreaMinimumAlphaMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Area Minimum Alpha filter.
Notes: Details for this filter:

FilterName:	CIAreaMinimumAlpha
DisplayName English:	Area Minimum Alpha
DisplayName German:	Bereichsminimum im Alpha-Kanal
DisplayName French:	Alpha minimum de la zone
DisplayName Italian:	Alfa minimo area
DisplayName Spanish:	Alfa m√nimo del √°rea

Categories:

- CICategoryReduction: Reduction

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputExtent: Extent

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.20.2   Methods

4.20.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.20.4   Properties

4.20.5   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Minimum Alpha attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 640 80]
IdentityVector:	n/a

(Read only property)

4.20.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Minimum Alpha attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.20.7   inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.20.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.21 class CIFilterAreaMinimumMBS

4.21.1 class CIFilterAreaMinimumMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Area Minimum filter.
Notes: Details for this filter:

FilterName:	CIAreaMinimum
DisplayName English:	Area Minimum
DisplayName German:	Bereichsminimum
DisplayName French:	Minimum de la zone
DisplayName Italian:	Minimo area
DisplayName Spanish:	M√nimo del √°rea

Categories:

- CICategoryReduction: Reduction

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputExtent: Extent

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.21.2   Methods

4.21.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.21.4   Properties

4.21.5   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Minimum attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 640 80]
IdentityVector:	n/a

(Read only property)

4.21.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Minimum attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.21.7 inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.21.8 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.22 class CIFilterAreaMinMaxMBS

4.22.1 class CIFilterAreaMinMaxMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Area Min and Max filter.
Notes: Details for this filter:

FilterName:	CIAreaMinMax
DisplayName English:	Area Min and Max
DisplayName German:	Fl√§che f√°r min. und max.
DisplayName French:	Min. et max. de la zone
DisplayName Italian:	Min e max area
DisplayName Spanish:	M√nimo y m√°ximo del √°rea

Categories:

- CICategoryReduction: Reduction

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputExtent: Extent

Output:

- outputImage

- outputImageNonMPS

- outputImageMPS:

Subclass of the CIFilterMBS class.

4.22.2   Methods

4.22.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.22.4   Properties

4.22.5   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Min and Max attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 640 80]
IdentityVector:	n/a

(Read only property)

4.22.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Min and Max attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.22.7   inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.22.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.23 class CIFilterAreaMinMaxRedMBS

4.23.1 class CIFilterAreaMinMaxRedMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Area Min and Max Red filter.
Notes: Details for this filter:

FilterName:	CIAreaMinMaxRed
DisplayName English:	Area Min and Max Red
DisplayName German:	Fl√§che f√ºr min. und max. Rot
DisplayName French:	Rouge min. et max. de la zone
DisplayName Italian:	Minimo e massimo di rosso nell‚Äôarea
DisplayName Spanish:	M√nimo y m√°ximo de rojo en el √°rea

Categories:

- CICategoryReduction: Reduction

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputExtent: Extent

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.23.2   Methods

4.23.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.23.4   Properties

4.23.5   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Min and Max Red attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 640 80]
IdentityVector:	n/a

(Read only property)

4.23.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Area Min and Max Red attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.23.7   inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.23.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.24 class CIFilterAttributedTextImageGeneratorMBS

4.24.1 class CIFilterAttributedTextImageGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Attributed Text Image Generator filter.
Notes: Details for this filter:

FilterName:	CIAttributedTextImageGenerator
DisplayName English:	Attributed Text Image Generator
DisplayName German:	Attributtextbildgenerator
DisplayName French:	G√©n√©rateur d‚Äôimage de texte attribu√©
DisplayName Italian:	Generatore immagine di testo attribuita
DisplayName Spanish:	Generador de im√°genes con texto con atributos

Categories:

- CICategoryGenerator: Generator

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputText: Text

- inputScaleFactor: Scale Factor

- inputPadding: Padding

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.24.2   Methods

4.24.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.24.4   Properties

4.24.5   AttributeinputPadding as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Attributed Text Image Generator attribute.
Notes: This attribute should have this content:

Name:	inputPadding
Class:	double
Type:	CIAttributeTypeInteger
DisplayName:	Padding
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	200
MinNumber:	0
SliderMaxNumber:	50
SliderMinNumber:	0

(Read only property)

4.24.6   AttributeinputScaleFactor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Attributed Text Image Generator attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputScaleFactor
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Scale Factor
DisplayName German:	Skalierungsfaktor
DisplayName French:	Facteur d‚Äô√©chelle
DisplayName Italian:	Fattore di scala
DisplayName Spanish:	Factor de escala
DefaultNumber:	1
IdentityNumber:	0
SliderMaxNumber:	4
SliderMinNumber:	1

4.24.7   AttributeinputText as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Attributed Text Image Generator attribute.
Notes: This attribute should have this content:

Name:	inputText
Class:	NSAttributedStringMBS
DisplayName:	Text

(Read only property)

4.24.8   inputPadding as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Padding
Notes:

Name:	inputPadding
Class:	double (NSNumber)
DisplayName English:	Padding
DisplayName German:	Padding
DisplayName French:	Padding
DisplayName Italian:	Padding
DisplayName Spanish:	Padding
Type:	CIAttributeTypeInteger

See AttributeinputPadding for more details.
(Read and Write property)

4.24.9   inputScaleFactor as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale Factor
Notes:

Name:	inputScaleFactor
Class:	double (NSNumber)
DisplayName English:	Scale Factor
DisplayName German:	Skalierungsfaktor
DisplayName French:	Facteur d‚Äô√©chelle
DisplayName Italian:	Fattore di scala
DisplayName Spanish:	Factor de escala
Type:	CIAttributeTypeScalar

See AttributeinputScaleFactor for more details.
(Read and Write property)

4.24.10   inputText as NSAttributedStringMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Text
Notes:

Name:	inputText
Class:	NSAttributedStringMBS (NSAttributedString)
DisplayName English:	Text
DisplayName German:	Text
DisplayName French:	Text
DisplayName Italian:	Text
DisplayName Spanish:	Text

See AttributeinputText for more details.
(Read and Write property)

4.25   class CIFilterAztecCodeGeneratorMBS

4.25.1   class CIFilterAztecCodeGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Aztec Code Generator filter.
Notes: Details for this filter:

FilterName:	CIAztecCodeGenerator
DisplayName English:	Aztec Code Generator
DisplayName German:	Aztec-Code-Generator
DisplayName French:	G√©n√©rateur de code Aztec
DisplayName Italian:	Generatore codice Aztec
DisplayName Spanish:	Generador de c√digo Aztec

Categories:

- CICategoryGenerator: Generator

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputMessage: Message

- inputCorrectionLevel: Correction Level

- inputLayers: Layers

- inputCompactStyle: Compact Style

Output:

- outputImage

- outputCGImage

Subclass of the CIFilterMBS class.

4.25.2   Methods

4.25.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.25.4   Properties

4.25.5   AttributeinputCompactStyle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Aztec Code Generator attribute.
Notes: This attribute should have this content:

Name:	inputCompactStyle
Class:	double
Type:	CIAttributeTypeBoolean
DisplayName English:	Compact Style
DisplayName German:	Komprimierungsstil
DisplayName French:	Style compact
DisplayName Italian:	Stile compatto
DisplayName Spanish:	Estilo compacto
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.25.6   AttributeinputCorrectionLevel as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Aztec Code Generator attribute.
Notes: This attribute should have this content:

Name:	inputCorrectionLevel
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Correction Level
DisplayName German:	Korrekturstufe
DisplayName French:	Niveau de correction
DisplayName Italian:	Livello di correzione
DisplayName Spanish:	Nivel de correcci√n
DefaultNumber:	23
IdentityNumber:	0
MaxNumber:	95
MinNumber:	5
SliderMaxNumber:	95
SliderMinNumber:	5

(Read only property)

4.25.7   AttributeinputLayers as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Aztec Code Generator attribute.
Notes: This attribute should have this content:

Name:	inputLayers
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Layers
DisplayName German:	Ebenen
DisplayName French:	Couches
DisplayName Italian:	Livelli
DisplayName Spanish:	Capas
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	32
MinNumber:	1
SliderMaxNumber:	32
SliderMinNumber:	1

(Read only property)

4.25.8   AttributeinputMessage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Aztec Code Generator attribute.
Notes: This attribute should have this content:

Name:	inputMessage
Class:	Memoryblock
DisplayName English:	Message
DisplayName German:	Nachricht
DisplayName French:	Message
DisplayName Italian:	Messaggio
DisplayName Spanish:	Mensaje
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.25.9   inputCompactStyle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Compact Style
Notes:

Name:	inputCompactStyle
Class:	double (NSNumber)
DisplayName English:	Compact Style
DisplayName German:	Komprimierungsstil
DisplayName French:	Style compact
DisplayName Italian:	Stile compatto
DisplayName Spanish:	Estilo compacto
Type:	CIAttributeTypeBoolean

See AttributeinputCompactStyle for more details.
(Read and Write property)

4.25.10   inputCorrectionLevel as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Correction Level
Notes:

Name:	inputCorrectionLevel
Class:	double (NSNumber)
DisplayName English:	Correction Level
DisplayName German:	Korrekturstufe
DisplayName French:	Niveau de correction
DisplayName Italian:	Livello di correzione
DisplayName Spanish:	Nivel de correcci√n
Type:	CIAttributeTypeInteger

See AttributeinputCorrectionLevel for more details.
(Read and Write property)

4.25.11   inputLayers as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Layers
Notes:

Name:	inputLayers
Class:	double (NSNumber)
DisplayName English:	Layers
DisplayName German:	Ebenen
DisplayName French:	Couches
DisplayName Italian:	Livelli
DisplayName Spanish:	Capas
Type:	CIAttributeTypeInteger

See AttributeinputLayers for more details.
(Read and Write property)

4.25.12   inputMessage as Memoryblock

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Message
Notes:

See AttributeinputMessage for more details.
(Read and Write property)

Name:	inputMessage
Class:	Memoryblock (NSData)
DisplayName English:	Message
DisplayName German:	Nachricht
DisplayName French:	Message
DisplayName Italian:	Messaggio
DisplayName Spanish:	Mensaje

4.26 class CIFilterBarcodeGeneratorMBS

4.26.1 class CIFilterBarcodeGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Barcode Generator filter.
Notes: Details for this filter:

FilterName:	CIBarcodeGenerator
DisplayName English:	Barcode Generator
DisplayName German:	Barcode-Generator
DisplayName French:	G√©n√©rateur de code-barres
DisplayName Italian:	Generatore codice a barre
DisplayName Spanish:	Generador de c√digos de barras

Categories:

- CICategoryGenerator: Generator

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputBarcodeDescriptor: Barcode Descriptor

Output:

- outputCGImageForQRCodeDescriptor

- outputCGImageForAztecCodeDescriptor

- outputCGImageForPDF417CodeDescriptor

- outputCGImageForDataMatrixCodeDescriptor

- outputCGImage

- outputImage

Subclass of the CIFilterMBS class.
Videos

- Presentation from Munich conference about MBS Plugins.

4.26.2   Methods

4.26.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.26.4   Properties

4.26.5   AttributeinputBarcodeDescriptor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Barcode Generator attribute.
Notes: This attribute should have this content:

Name:	inputBarcodeDescriptor
Class:	CIBarcodeDescriptorMBS
DisplayName English:	Barcode Descriptor
DisplayName German:	Barcodebeschreibung
DisplayName French:	Descripteur du code-barres
DisplayName Italian:	Descrittore codice a barre
DisplayName Spanish:	Descriptor de c√digo de barras

(Read only property)

4.26.6   inputBarcodeDescriptor as CIBarcodeDescriptorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Barcode Descriptor
Notes:

See AttributeinputBarcodeDescriptor for more details.
(Read and Write property)

Name:	inputBarcodeDescriptor
Class:	CIBarcodeDescriptorMBS (CIBarcodeDescriptor)
DisplayName English:	Barcode Descriptor
DisplayName German:	Barcodebeschreibung
DisplayName French:	Descripteur du code-barres
DisplayName Italian:	Descrittore codice a barre
DisplayName Spanish:	Descriptor de c√digo de barras

4.27   class CIFilterBarsSwipeTransitionMBS

4.27.1   class CIFilterBarsSwipeTransitionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Bars Swipe Transition filter.
Notes: Details for this filter:

FilterName:	CIBarsSwipeTransition
DisplayName English:	Bars Swipe Transition
DisplayName German:	Balken-Swipe-√úbergang
DisplayName French:	Transition de type balayage
DisplayName Italian:	Transizione colpi a barre
DisplayName Spanish:	Transici√n de barrido de barras

Categories:

- CICategoryTransition: Transition

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTargetImage: Target Image

- inputAngle: Angle

- inputWidth: Width

- inputBarOffset: Bar Offset

- inputTime: Time

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.27.2 Methods

4.27.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.27.4 Properties

4.27.5 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bars Swipe Transition attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	3.141593
IdentityNumber:	0
SliderMaxNumber:	6.283185
SliderMinNumber:	0

(Read only property)

4.27.6 AttributeinputBarOffset as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bars Swipe Transition attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputBarOffset
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Bar Offset
DisplayName German:	Balkenversatz
DisplayName French:	D√©calage de la barre
DisplayName Italian:	Scarto della barra
DisplayName Spanish:	Desviaci√n barra
DefaultNumber:	10
IdentityNumber:	0
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	100
SliderMinNumber:	1

4.27.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bars Swipe Transition attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.27.8   AttributeinputTargetImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bars Swipe Transition attribute.
Notes: This attribute should have this content:

Name:	inputTargetImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.27.9   AttributeinputTime as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bars Swipe Transition attribute.
Notes: This attribute should have this content:

Name:	inputTime
Class:	double
Type:	CIAttributeTypeTime
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.27.10   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bars Swipe Transition attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	30
IdentityNumber:	0
MaxNumber:	0
MinNumber:	2
SliderMaxNumber:	300
SliderMinNumber:	2

(Read only property)

4.27.11   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.27.12   inputBarOffset as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bar Offset
Notes:

Name:	inputBarOffset
Class:	double (NSNumber)
DisplayName English:	Bar Offset
DisplayName German:	Balkenversatz
DisplayName French:	D√©calage de la barre
DisplayName Italian:	Scarto della barra
DisplayName Spanish:	Desviaci√n barra
Type:	CIAttributeTypeScalar

See AttributeinputBarOffset for more details.
(Read and Write property)

4.27.13   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.27.14   inputTargetImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Target Image
Notes:

See AttributeinputTargetImage for more details.
(Read and Write property)

Name:	inputTargetImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
Type:	CIAttributeTypeImage

4.27.15   inputTime as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Time
Notes:

Name:	inputTime
Class:	double (NSNumber)
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
Type:	CIAttributeTypeTime

See AttributeinputTime for more details.
(Read and Write property)

4.27.16   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.28   class CIFilterBicubicScaleTransformMBS

4.28.1   class CIFilterBicubicScaleTransformMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Bicubic Scale Transform filter.
Notes: Details for this filter:

FilterName:	CIBicubicScaleTransform
DisplayName English:	Bicubic Scale Transform
DisplayName German:	Bikubische Skalierungstransformation
DisplayName French:	Transformation d‚Äô√©chelle bicubique
DisplayName Italian:	Trasforma scala bicubica
DisplayName Spanish:	Transformar mediante escala bic√bica

Categories:

- CICategoryGeometryAdjustment: Geometry Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image
- inputScale: Scale
- inputAspectRatio: Aspect Ratio
- inputB: B
- inputC: C

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.28.2 Methods

4.28.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.28.4 Properties

4.28.5 AttributeinputAspectRatio as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bicubic Scale Transform attribute.
Notes: This attribute should have this content:

Name:	inputAspectRatio
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Aspect Ratio
DisplayName German:	Seitenverh√§ltnis
DisplayName French:	Proportions
DisplayName Italian:	Proporzioni
DisplayName Spanish:	Proporciones
DefaultNumber:	1
IdentityNumber:	1
SliderMaxNumber:	2
SliderMinNumber:	0.5

(Read only property)

4.28.6 AttributeinputB as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bicubic Scale Transform attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputB
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	B
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.28.7   AttributeinputC as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bicubic Scale Transform attribute.
Notes: This attribute should have this content:

Name:	inputC
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	C
DefaultNumber:	0.75
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.28.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bicubic Scale Transform attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.28.9   AttributeinputScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bicubic Scale Transform attribute.
Notes: This attribute should have this content:

Name:	inputScale
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
DefaultNumber:	1
IdentityNumber:	1
SliderMaxNumber:	100
SliderMinNumber:	0.05

(Read only property)

4.28.10   inputAspectRatio as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Aspect Ratio
Notes:

See AttributeinputAspectRatio for more details.
(Read and Write property)

Name:	inputAspectRatio
Class:	double (NSNumber)
DisplayName English:	Aspect Ratio
DisplayName German:	Seitenverh√§ltnis
DisplayName French:	Proportions
DisplayName Italian:	Proporzioni
DisplayName Spanish:	Proporciones
Type:	CIAttributeTypeScalar

4.28.11   inputB as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute B
Notes:

Name:	inputB
Class:	double (NSNumber)
DisplayName English:	B
DisplayName German:	B
DisplayName French:	B
DisplayName Italian:	B
DisplayName Spanish:	B
Type:	CIAttributeTypeScalar

See AttributeinputB for more details.
(Read and Write property)

4.28.12   inputC as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute C
Notes:

Name:	inputC
Class:	double (NSNumber)
DisplayName English:	C
DisplayName German:	C
DisplayName French:	C
DisplayName Italian:	C
DisplayName Spanish:	C
Type:	CIAttributeTypeScalar

See AttributeinputC for more details.
(Read and Write property)

4.28.13   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.28.14   inputScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale
Notes:

Name:	inputScale
Class:	double (NSNumber)
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
Type:	CIAttributeTypeScalar

See AttributeinputScale for more details.
(Read and Write property)

4.29   class CIFilterBlendWithAlphaMaskMBS

4.29.1   class CIFilterBlendWithAlphaMaskMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Blend With Alpha Mask filter.
Notes: Details for this filter:

FilterName:	CIBlendWithAlphaMask
DisplayName English:	Blend With Alpha Mask
DisplayName German:	Mit Alpha-Maske √ᵒberblenden
DisplayName French:	Fusion avec masque Alpha
DisplayName Italian:	Sfumatura con maschera alfa
DisplayName Spanish:	Fusionar con la m√°scara alfa

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

- inputMaskImage: Mask Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.29.2 Methods

4.29.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.29.4 Properties

4.29.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Blend With Alpha Mask attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.29.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Blend With Alpha Mask attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.29.7   AttributeinputMaskImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Blend With Alpha Mask attribute.
Notes: This attribute should have this content:

Name:	inputMaskImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Mask Image
DisplayName German:	Maske
DisplayName French:	Image du masque
DisplayName Italian:	Immagine maschera
DisplayName Spanish:	Imagen de m√°scara
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.29.8   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

See AttributeinputBackgroundImage for more details.
(Read and Write property)

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

4.29.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.29.10   inputMaskImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Mask Image
Notes:

Name:	inputMaskImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Mask Image
DisplayName German:	Maske
DisplayName French:	Image du masque
DisplayName Italian:	Immagine maschera
DisplayName Spanish:	Imagen de m√°scara
Type:	CIAttributeTypeImage

See AttributeinputMaskImage for more details.
(Read and Write property)

4.30 class CIFilterBlendWithBlueMaskMBS

4.30.1 class CIFilterBlendWithBlueMaskMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Blend With Blue Mask filter.
Notes: Details for this filter:

FilterName:	CIBlendWithBlueMask
DisplayName English:	Blend With Blue Mask
DisplayName German:	Mit blauer Maske
DisplayName French:	Fusion avec masque de bleu
DisplayName Italian:	Sfumatura con maschera blu
DisplayName Spanish:	Fusionar con la m√°scara azul

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

- inputMaskImage: Mask Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.30.2 Methods

4.30.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.30.4 Properties

4.30.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Blend With Blue Mask attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.30.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Blend With Blue Mask attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.30.7 AttributeinputMaskImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Blend With Blue Mask attribute.
Notes: This attribute should have this content:

Name:	inputMaskImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Mask Image
DisplayName German:	Maske
DisplayName French:	Image du masque
DisplayName Italian:	Immagine maschera
DisplayName Spanish:	Imagen de m√°scara
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.30.8 inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

See AttributeinputBackgroundImage for more details.
(Read and Write property)

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d,Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

4.30.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.30.10   inputMaskImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Mask Image
Notes:

Name:	inputMaskImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Mask Image
DisplayName German:	Maske
DisplayName French:	Image du masque
DisplayName Italian:	Immagine maschera
DisplayName Spanish:	Imagen de m√°scara
Type:	CIAttributeTypeImage

See AttributeinputMaskImage for more details.
(Read and Write property)

4.31   class CIFilterBlendWithMaskMBS

4.31.1   class CIFilterBlendWithMaskMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Blend With Mask filter.
Notes: Details for this filter:

FilterName:	CIBlendWithMask
DisplayName English:	Blend With Mask
DisplayName German:	Mit Bild maskieren
DisplayName French:	Fusion avec masque
DisplayName Italian:	Sfumatura con maschera
DisplayName Spanish:	Fusionar con la m√°scara

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

- inputMaskImage: Mask Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.31.2 Methods

4.31.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.31.4 Properties

4.31.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Blend With Mask attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.31.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Blend With Mask attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.31.7   AttributeinputMaskImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Blend With Mask attribute.
Notes: This attribute should have this content:

Name:	inputMaskImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Mask Image
DisplayName German:	Maske
DisplayName French:	Image du masque
DisplayName Italian:	Immagine maschera
DisplayName Spanish:	Imagen de m√°scara
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.31.8   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

See AttributeinputBackgroundImage for more details.
(Read and Write property)

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

4.31.9 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.31.10 inputMaskImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Mask Image
Notes:

Name:	inputMaskImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Mask Image
DisplayName German:	Maske
DisplayName French:	Image du masque
DisplayName Italian:	Immagine maschera
DisplayName Spanish:	Imagen de m√°scara
Type:	CIAttributeTypeImage

See AttributeinputMaskImage for more details.
(Read and Write property)

4.32 class CIFilterBlendWithRedMaskMBS

4.32.1 class CIFilterBlendWithRedMaskMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Blend With Red Mask filter.
Notes: Details for this filter:

FilterName:	CIBlendWithRedMask
DisplayName English:	Blend With Red Mask
DisplayName German:	Mit roter Maske
DisplayName French:	Fusion avec masque de rouge
DisplayName Italian:	Sfumatura con maschera rossa
DisplayName Spanish:	Fusionar con la m√°scara roja

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

- inputMaskImage: Mask Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.32.2   Methods

4.32.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.32.4   Properties

4.32.5   AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Blend With Red Mask attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.32.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Blend With Red Mask attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.32.7   AttributeinputMaskImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Blend With Red Mask attribute.
Notes: This attribute should have this content:

Name:	inputMaskImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Mask Image
DisplayName German:	Maske
DisplayName French:	Image du masque
DisplayName Italian:	Immagine maschera
DisplayName Spanish:	Imagen de m√°scara
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.32.8   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

See AttributeinputBackgroundImage for more details.
(Read and Write property)

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

4.32.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.32.10   inputMaskImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Mask Image
Notes:

Name:	inputMaskImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Mask Image
DisplayName German:	Maske
DisplayName French:	Image du masque
DisplayName Italian:	Immagine maschera
DisplayName Spanish:	Imagen de m√°scara
Type:	CIAttributeTypeImage

See AttributeinputMaskImage for more details.
(Read and Write property)

4.33   class CIFilterBloomMBS

4.33.1   class CIFilterBloomMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Bloom filter.
Notes: Details for this filter:

FilterName:	CIBloom
DisplayName English:	Bloom
DisplayName German:	√úberstrahlen
DisplayName French:	Floraison
DisplayName Italian:	Velatura
DisplayName Spanish:	Veladura

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputRadius: Radius

- inputIntensity: Intensity

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.33.2 Methods

4.33.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.33.4 Properties

4.33.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bloom attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.33.6 AttributeinputIntensity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bloom attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputIntensity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
DefaultNumber:	0.5
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.33.7   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bloom attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	10
IdentityNumber:	0
SliderMaxNumber:	100
SliderMinNumber:	0

(Read only property)

4.33.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

(Read and Write property)

4.33.9 inputIntensity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Intensity
Notes:

Name:	inputIntensity
Class:	double (NSNumber)
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
Type:	CIAttributeTypeScalar

See AttributeinputIntensity for more details.
(Read and Write property)

4.33.10 inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

4.34 class CIFilterBokehBlurMBS

4.34.1 class CIFilterBokehBlurMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Bokeh Blur filter.
Notes: Details for this filter:

FilterName:	CIBokehBlur
DisplayName English:	Bokeh Blur
DisplayName German:	Bokeh unscharf
DisplayName French:	Bokeh (flou)
DisplayName Italian:	Sfocatura bokeh
DisplayName Spanish:	Desenfoque bokeh

Categories:

- CICategoryBlur: Blur

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputRadius: Radius

- inputRingAmount: Ring Amount

- inputRingSize: Ring Size

- inputSoftness: Softness

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.34.2   Methods

4.34.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.34.4   Properties

4.34.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bokeh Blur attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.34.6   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bokeh Blur attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	20
IdentityNumber:	0
MaxNumber:	500
MinNumber:	0
SliderMaxNumber:	100
SliderMinNumber:	0

4.34.7   AttributeinputRingAmount as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bokeh Blur attribute.
Notes: This attribute should have this content:

Name:	inputRingAmount
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Ring Amount
DisplayName German:	Ringst√§rke
DisplayName French:	Intensit√© de l‚Äôanneau
DisplayName Italian:	Intensit√† anello
DisplayName Spanish:	N√∫mero de anillos
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.34.8   AttributeinputRingSize as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bokeh Blur attribute.
Notes: This attribute should have this content:

Name:	inputRingSize
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Ring Size
DisplayName German:	Ringgr√√üe
DisplayName French:	Taille de l‚Äôanneau
DisplayName Italian:	Dimensioni anello
DisplayName Spanish:	Tama√±o del anillo
DefaultNumber:	0.1
IdentityNumber:	0
MaxNumber:	0.2
MinNumber:	0
SliderMaxNumber:	0.2
SliderMinNumber:	0

(Read only property)

4.34.9   AttributeinputSoftness as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bokeh Blur attribute.
Notes: This attribute should have this content:

Name:	inputSoftness
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Softness
DefaultNumber:	1
IdentityNumber:	0
MaxNumber:	10
MinNumber:	0
SliderMaxNumber:	0.4
SliderMinNumber:	0.25

(Read only property)

4.34.10 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.34.11 inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.34.12 inputRingAmount as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Ring Amount
Notes:

Name:	inputRingAmount
Class:	double (NSNumber)
DisplayName English:	Ring Amount
DisplayName German:	Ringst√§rke
DisplayName French:	Intensit√© de l‚Äôanneau
DisplayName Italian:	Intensit√† anello
DisplayName Spanish:	N√∫mero de anillos
Type:	CIAttributeTypeScalar

See AttributeinputRingAmount for more details.
(Read and Write property)

4.34.13   inputRingSize as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Ring Size
Notes:

Name:	inputRingSize
Class:	double (NSNumber)
DisplayName English:	Ring Size
DisplayName German:	Ringgr√∂√üe
DisplayName French:	Taille de l‚Äôanneau
DisplayName Italian:	Dimensioni anello
DisplayName Spanish:	Tama√±o del anillo
Type:	CIAttributeTypeScalar

See AttributeinputRingSize for more details.
(Read and Write property)

4.34.14   inputSoftness as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Softness
Notes:

See AttributeinputSoftness for more details.
(Read and Write property)

Name:	inputSoftness
Class:	double (NSNumber)
DisplayName English:	Softness
DisplayName German:	Softness
DisplayName French:	Softness
DisplayName Italian:	Softness
DisplayName Spanish:	Softness
Type:	CIAttributeTypeScalar

4.35   class CIFilterBoxBlurMBS

4.35.1   class CIFilterBoxBlurMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Box Blur filter.
Notes: Details for this filter:

FilterName:	CIBoxBlur
DisplayName English:	Box Blur
DisplayName German:	Quadratische Unsch√§rfe
DisplayName French:	Flou (Box blur)
DisplayName Italian:	Sfocatura riquadro
DisplayName Spanish:	Caja difuminada

Categories:

- CICategoryBlur: Blur

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.35.2   Methods

4.35.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.35.4   Properties

4.35.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Box Blur attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.35.6   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Box Blur attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	10
IdentityNumber:	0
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	100
SliderMinNumber:	1

4.35.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.35.8   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

4.36   class CIFilterBumpDistortionLinearMBS

4.36.1   class CIFilterBumpDistortionLinearMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Bump Distortion Linear filter.
Notes: Details for this filter:

FilterName:	CIBumpDistortionLinear
DisplayName English:	Bump Distortion Linear
DisplayName German:	Verzerrung ‚ÄûBump‚Äú (Linear)
DisplayName French:	D√©formation Bosse lin√©aire
DisplayName Italian:	Lineare distorsione urto
DisplayName Spanish:	Distorsi√n linear suplementaria

Categories:

- CICategoryDistortionEffect: Distortion Effect
- CICategoryVideo: Video
- CICategoryStillImage: Still Image
- CICategoryBuiltIn: Built-In
- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image
- inputCenter: Center
- inputRadius: Radius
- inputAngle: Angle
- inputScale: Scale

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.36.2 Methods

4.36.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.36.4 Properties

4.36.5 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bump Distortion Linear attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	6.283185
SliderMinNumber:	0

(Read only property)

4.36.6 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bump Distortion Linear attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.36.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bump Distortion Linear attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.36.8   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bump Distortion Linear attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	300
IdentityNumber:	0
SliderMaxNumber:	600
SliderMinNumber:	0

4.36.9 AttributeinputScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bump Distortion Linear attribute.
Notes: This attribute should have this content:

Name:	inputScale
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
DefaultNumber:	0.5
IdentityNumber:	1
MaxNumber:	0
MinNumber:	-1
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.36.10 inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.36.11   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.36.12   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.36.13   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.36.14   inputScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale
Notes:

Name:	inputScale
Class:	double (NSNumber)
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
Type:	CIAttributeTypeScalar

See AttributeinputScale for more details.
(Read and Write property)

4.37 class CIFilterBumpDistortionMBS

4.37.1 class CIFilterBumpDistortionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Bump Distortion filter.
Notes: Details for this filter:

FilterName:	CIBumpDistortion
DisplayName English:	Bump Distortion
DisplayName German:	Verzerrung ‚ÄûBump‚Äú
DisplayName French:	D√©formation Bosse
DisplayName Italian:	Distorsione urto
DisplayName Spanish:	Distorsi√n suplementaria

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputRadius: Radius

- inputScale: Scale

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.37.2   Methods

4.37.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.37.4   Properties

4.37.5   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bump Distortion attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.37.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bump Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.37.7   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bump Distortion attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	300
IdentityNumber:	0
SliderMaxNumber:	600
SliderMinNumber:	0

(Read only property)

4.37.8   AttributeinputScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Bump Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputScale
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
DefaultNumber:	0.5
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	-1

4.37.9   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.37.10   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.37.11   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.37.12   inputScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale
Notes:

Name:	inputScale
Class:	double (NSNumber)
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
Type:	CIAttributeTypeScalar

See AttributeinputScale for more details.

(Read and Write property)

4.38   class CIFilterCameraCalibrationLensCorrectionMBS

4.38.1   class CIFilterCameraCalibrationLensCorrectionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Lens Correction for AVC filter.
Notes: Details for this filter:

FilterName:	CICameraCalibrationLensCorrection
DisplayName English:	Lens Correction for AVC
DisplayName German:	Objektivkorrektur: AVC
DisplayName French:	Correction d‚Äôobjectif pour AVC
DisplayName Italian:	Correzione lente AVC
DisplayName Spanish:	Correcci√n de lente para AVC

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputAVCameraCalibrationData: AVCameraCalibrationData

- inputUseInverseLookUpTable: Use Inverse Lookup Table

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.38.2   Methods

4.38.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.38.4   Properties

4.38.5   AttributeinputAVCameraCalibrationData as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lens Correction for AVC attribute.
Notes: This attribute should have this content:

Name:	inputAVCameraCalibrationData
Class:	Variant
DisplayName:	AVCameraCalibrationData

(Read only property)

4.38.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lens Correction for AVC attribute.
Notes: This attribute should have this content:

(Read only property)

4.38.7   AttributeinputUseInverseLookUpTable as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lens Correction for AVC attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

Name:	inputUseInverseLookUpTable
Class:	double
Type:	CIAttributeTypeBoolean
DisplayName English:	Use Inverse Lookup Table
DisplayName German:	Invertierte Lookup-Tabelle verwenden
DisplayName French:	Utiliser la table de conversion invers√©e
DisplayName Italian:	Utilizza la tabella di ricerca inversa
DisplayName Spanish:	Usar tabla de consulta inversa
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.38.8 inputAVCameraCalibrationData as Variant

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute AVCameraCalibrationData
Notes:

Name:	inputAVCameraCalibrationData
Class:	Variant (AVCameraCalibrationData)
DisplayName English:	AVCameraCalibrationData
DisplayName German:	AVCameraCalibrationData
DisplayName French:	AVCameraCalibrationData
DisplayName Italian:	AVCameraCalibrationData
DisplayName Spanish:	AVCameraCalibrationData

See AttributeinputAVCameraCalibrationData for more details.
(Read and Write property)

4.38.9 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.38.10 inputUseInverseLookUpTable as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Use Inverse Lookup Table
Notes:

Name:	inputUseInverseLookUpTable
Class:	double (NSNumber)
DisplayName English:	Use Inverse Lookup Table
DisplayName German:	Invertierte Lookup-Tabelle verwenden
DisplayName French:	Utiliser la table de conversion invers√©e
DisplayName Italian:	Utilizza la tabella di ricerca inversa
DisplayName Spanish:	Usar tabla de consulta inversa
Type:	CIAttributeTypeBoolean

See AttributeinputUseInverseLookUpTable for more details.
(Read and Write property)

4.39   class CIFilterCheckerboardGeneratorMBS

4.39.1   class CIFilterCheckerboardGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Checkerboard filter.
Notes: Details for this filter:

FilterName:	CICheckerboardGenerator
DisplayName English:	Checkerboard
DisplayName German:	Schachbrettmuster
DisplayName French:	Damier
DisplayName Italian:	Scacchiera
DisplayName Spanish:	Tablero

Categories:

- CICategoryGenerator: Generator

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputCenter: Center

- inputColor0: Color 1

- inputColor1: Color 2

- inputWidth: Width

- inputSharpness: Sharpness

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.39.2   Methods

4.39.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.39.4   Properties

4.39.5   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Checkerboard attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.39.6   AttributeinputColor0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Checkerboard attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputColor0
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color 1
DisplayName German:	Farbe 1
DisplayName French:	Couleur 1
DisplayName Italian:	Colore 1
DisplayName Spanish:	Color 1
DefaultColor:	Red = 1, Green = 1, Blue = 1, Alpha = 1
IdentityNumber:	0

4.39.7 AttributeinputColor1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Checkerboard attribute.
Notes: This attribute should have this content:

Name:	inputColor1
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color 2
DisplayName German:	Farbe 2
DisplayName French:	Couleur 2
DisplayName Italian:	Colore 2
DisplayName Spanish:	Color 2
DefaultColor:	Red = 0, Green = 0, Blue = 0, Alpha = 1
IdentityNumber:	0

(Read only property)

4.39.8 AttributeinputSharpness as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Checkerboard attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputSharpness
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
DefaultNumber:	1
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.39.9   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Checkerboard attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	80
IdentityNumber:	0
SliderMaxNumber:	800
SliderMinNumber:	0

(Read only property)

4.39.10   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.39.11   inputColor0 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color 1
Notes:

Name:	inputColor0
Class:	CIColorMBS (CIColor)
DisplayName English:	Color 1
DisplayName German:	Farbe 1
DisplayName French:	Couleur 1
DisplayName Italian:	Colore 1
DisplayName Spanish:	Color 1
Type:	CIAttributeTypeColor

See AttributeinputColor0 for more details.
(Read and Write property)

4.39.12   inputColor1 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color 2
Notes:

See AttributeinputColor1 for more details.
(Read and Write property)

Name:	inputColor1
Class:	CIColorMBS (CIColor)
DisplayName English:	Color 2
DisplayName German:	Farbe 2
DisplayName French:	Couleur 2
DisplayName Italian:	Colore 2
DisplayName Spanish:	Color 2
Type:	CIAttributeTypeColor

4.39.13   inputSharpness as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Sharpness
Notes:

Name:	inputSharpness
Class:	double (NSNumber)
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
Type:	CIAttributeTypeScalar

See AttributeinputSharpness for more details.
(Read and Write property)

4.39.14   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.40   class CIFilterCircleSplashDistortionMBS

4.40.1   class CIFilterCircleSplashDistortionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Circle Splash Distortion filter.
Notes: Details for this filter:

FilterName:	CICircleSplashDistortion
DisplayName English:	Circle Splash Distortion
DisplayName German:	Verzerrung ‚ÄûKreisf√rmiger Platscher‚Äú
DisplayName French:	D√©formation √âclaboussure circulaire
DisplayName Italian:	Distorsione spruzzo circolare
DisplayName Spanish:	Distorsi√n a modo de salpicadura en c√rculo

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.40.2 Methods

4.40.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.40.4 Properties

4.40.5 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Circle Splash Distortion attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.40.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Circle Splash Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.40.7   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Circle Splash Distortion attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	150
IdentityNumber:	0
SliderMaxNumber:	1000
SliderMinNumber:	0

(Read only property)

4.40.8   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

4.40.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.40.10   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.

(Read and Write property)

4.41 class CIFilterCircularScreenMBS

4.41.1 class CIFilterCircularScreenMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Circular Screen filter.
Notes: Details for this filter:

FilterName:	CICircularScreen
DisplayName English:	Circular Screen
DisplayName German:	Konzentrisches Halbtonraster
DisplayName French:	√âcran circulaire
DisplayName Italian:	Schermo circolare
DisplayName Spanish:	Pantalla circular

Categories:

- CICategoryHalftoneEffect: Halftone Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputCenter: Center

- inputWidth: Width

- inputSharpness: Sharpness

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.41.2   Methods

4.41.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.41.4   Properties

4.41.5   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Circular Screen attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.41.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Circular Screen attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.41.7   AttributeinputSharpness as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Circular Screen attribute.
Notes: This attribute should have this content:

Name:	inputSharpness
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
DefaultNumber:	0.7
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.41.8   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Circular Screen attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	6
IdentityNumber:	0
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	50
SliderMinNumber:	2

(Read only property)

4.41.9   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.41.10   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.41.11 inputSharpness as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Sharpness
Notes:

Name:	inputSharpness
Class:	double (NSNumber)
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
Type:	CIAttributeTypeScalar

See AttributeinputSharpness for more details.
(Read and Write property)

4.41.12 inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

See AttributeinputWidth for more details.
(Read and Write property)

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

4.42 class CIFilterCircularWrapMBS

4.42.1 class CIFilterCircularWrapMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Circular Wrap Distortion filter.
Example:

dim p as Picture = LogoMBS(500)
dim data as string = PictureToPNGStringMBS(p,80)
dim i as new CIImageMBS(data)

dim c as new CIFilterCircularWrapMBS
c.inputImage = i

dim o as CIImageMBS = c.outputImage
Backdrop = o.RenderPicture

Notes: Details for this filter:

FilterName:	CICircularWrap
DisplayName English:	Circular Wrap Distortion
DisplayName German:	Kreisf√rmig kr√ºmmen
DisplayName French:	D√©formation Bouclage circulaire
DisplayName Italian:	Distorsione involucro circolare
DisplayName Spanish:	Distorsi√n a modo de envoltura circular

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputRadius: Radius

- inputAngle: Angle

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.42.2   Methods

4.42.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.42.4   Properties

4.42.5   AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Circular Wrap Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

4.42.6   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Circular Wrap Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.42.7 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Circular Wrap Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

4.42.8 AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Circular Wrap Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	150
IdentityNumber:	0
SliderMaxNumber:	600
SliderMinNumber:	0

4.42.9 inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Example:

```
dim p as Picture = LogoMBS(500)
dim data as string = PictureToPNGStringMBS(p,80)
dim i as new CIImageMBS(data)

dim c as new CIFilterCircularWrapMBS
c.inputImage = i
c.inputAngle = 0.1

dim o as CIImageMBS = c.outputImage
Backdrop = o.RenderPicture
```

Notes:

See AttributeinputAngle for more details.

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

(Read and Write property)

4.42.10 inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.42.11 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Example:

```
dim p as Picture = LogoMBS(500)
dim data as string = PictureToPNGStringMBS(p,80)
dim i as new CIImageMBS(data)

dim c as new CIFilterCircularWrapMBS
```

c.inputImage = i

dim o as CIImageMBS = c.outputImage
Backdrop = o.RenderPicture

Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.42.12   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.43   class CIFilterClampMBS

4.43.1   class CIFilterClampMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Clamp filter.
Notes: Details for this filter:

FilterName:	CIClamp
DisplayName English:	Clamp
DisplayName German:	Arretieren
DisplayName French:	Attacher
DisplayName Italian:	Morsetto
DisplayName Spanish:	Fijar

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputExtent: Extent

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.43.2   Methods

4.43.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.43.4   Properties

4.43.5   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Clamp attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 640 80]
IdentityVector:	n/a

(Read only property)

4.43.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Clamp attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.43.7   inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.43.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.44 class CIFilterCMYKHalftoneMBS

4.44.1 class CIFilterCMYKHalftoneMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage CMYK Halftone filter.
Notes: Details for this filter:

FilterName:	CICMYKHalftone
DisplayName English:	CMYK Halftone
DisplayName German:	CMYK-Halbton
DisplayName French:	Demi-teinte CMJN
DisplayName Italian:	Mezzitoni CMYK
DisplayName Spanish:	Semitono CMYK

Categories:

- CICategoryHalftoneEffect: Halftone Effect
- CICategoryVideo: Video
- CICategoryStillImage: Still Image
- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image
- inputCenter: Center
- inputWidth: Width
- inputAngle: Angle
- inputSharpness: Sharpness
- inputGCR: Gray Component Replacement
- inputUCR: Under Color Removal

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.44.2 Methods

4.44.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.44.4 Properties

4.44.5 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the CMYK Halftone attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.44.6 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the CMYK Halftone attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.44.7   AttributeinputGCR as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the CMYK Halftone attribute.
Notes: This attribute should have this content:

Name:	inputGCR
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Gray Component Replacement
DisplayName German:	Graukomponente ersetzen
DisplayName French:	Remplacement de la composante grise
DisplayName Italian:	Sostituzione componente grigio
DisplayName Spanish:	Sustituci√n de componente gris
DefaultNumber:	1
IdentityNumber:	1
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.44.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the CMYK Halftone attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.44.9   AttributeinputSharpness as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the CMYK Halftone attribute.
Notes: This attribute should have this content:

Name:	inputSharpness
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
DefaultNumber:	0.7
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.44.10   AttributeinputUCR as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the CMYK Halftone attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputUCR
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Under Color Removal
DisplayName German:	Unterfarben-Korrektur
DisplayName French:	√âlimination des sous-couleurs
DisplayName Italian:	Rimozione colore inferiore
DisplayName Spanish:	Bajo supresi√n de color
DefaultNumber:	0.5
IdentityNumber:	0.5
SliderMaxNumber:	1
SliderMinNumber:	0

4.44.11   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the CMYK Halftone attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	6
IdentityNumber:	6
MaxNumber:	0
MinNumber:	-2
SliderMaxNumber:	100
SliderMinNumber:	2

(Read only property)

4.44.12   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.44.13   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.44.14   inputGCR as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Gray Component Replacement
Notes:

See AttributeinputGCR for more details.
(Read and Write property)

Name: inputGCR
Class: double (NSNumber)
DisplayName English: Gray Component Replacement
DisplayName German: Graukomponente ersetzen
DisplayName French: Remplacement de la composante grise
DisplayName Italian: Sostituzione componente grigio
DisplayName Spanish: Sustituci√n de componente gris
Type: CIAttributeTypeScalar

4.44.15   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name: inputImage
Class: CIImageMBS (CIImage)
DisplayName English: Image
DisplayName German: Bild
DisplayName French: Image
DisplayName Italian: Immagine
DisplayName Spanish: Imagen
Type: CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.44.16   inputSharpness as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Sharpness
Notes:

Name: inputSharpness
Class: double (NSNumber)
DisplayName English: Sharpness
DisplayName German: Sch√§rfe
DisplayName French: Nettet√©
DisplayName Italian: Nitidezza
DisplayName Spanish: Nitidez
Type: CIAttributeTypeDistance

See AttributeinputSharpness for more details.
(Read and Write property)

4.44.17   inputUCR as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Under Color Removal
Notes:

Name:	inputUCR
Class:	double (NSNumber)
DisplayName English:	Under Color Removal
DisplayName German:	Unterfarben-Korrektur
DisplayName French:	√âlimination des sous-couleurs
DisplayName Italian:	Rimozione colore inferiore
DisplayName Spanish:	Bajo supresi√n de color
Type:	CIAttributeTypeScalar

See AttributeinputUCR for more details.
(Read and Write property)

4.44.18   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.45 class CIFilterCode128BarcodeGeneratorMBS

4.45.1 class CIFilterCode128BarcodeGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Code 128 Barcode Generator filter.
Notes: Details for this filter:

FilterName:	CICode128BarcodeGenerator
DisplayName English:	Code 128 Barcode Generator
DisplayName German:	Code 128 Barcode-Generator
DisplayName French:	G√©n√©rateur de code-barres Code¬†128
DisplayName Italian:	Generatore codice a barre Code128
DisplayName Spanish:	Generador de c√digos de barras Code128

Categories:

- CICategoryGenerator: Generator

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputMessage: Message

- inputQuietSpace: Quiet Space

- inputBarcodeHeight: Barcode Height

Output:

- outputImage

- outputCGImage

Subclass of the CIFilterMBS class.
Videos

- [Presentation from Munich conference about MBS Plugins.](#)

4.45.2   Methods

4.45.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.45.4   Properties

4.45.5   AttributeinputBarcodeHeight as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Code 128 Barcode Generator attribute.
Notes: This attribute should have this content:

Name:	inputBarcodeHeight
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Barcode Height
DisplayName German:	Barcodeh√he
DisplayName French:	Hauteur du code-barres
DisplayName Italian:	Altezza codice a barre
DisplayName Spanish:	Altura del c√digo de barras
DefaultNumber:	32
IdentityNumber:	0
MaxNumber:	500
MinNumber:	1
SliderMaxNumber:	50
SliderMinNumber:	1

(Read only property)

4.45.6   AttributeinputMessage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Code 128 Barcode Generator attribute.
Notes: This attribute should have this content:

Name:	inputMessage
Class:	Memoryblock
DisplayName English:	Message
DisplayName German:	Nachricht
DisplayName French:	Message
DisplayName Italian:	Messaggio
DisplayName Spanish:	Mensaje
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.45.7   AttributeinputQuietSpace as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Code 128 Barcode Generator attribute.
Notes: This attribute should have this content:

Name:	inputQuietSpace
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Quiet Space
DisplayName German:	Ruheraum
DisplayName French:	Marge
DisplayName Italian:	Area non interattiva
DisplayName Spanish:	Espacio sin modificaciones
DefaultNumber:	7
IdentityNumber:	0
MaxNumber:	100
MinNumber:	0
SliderMaxNumber:	20
SliderMinNumber:	0

(Read only property)

4.45.8   inputBarcodeHeight as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Barcode Height

Notes:

Name:	inputBarcodeHeight
Class:	double (NSNumber)
DisplayName English:	Barcode Height
DisplayName German:	Barcodeh√he
DisplayName French:	Hauteur du code-barres
DisplayName Italian:	Altezza codice a barre
DisplayName Spanish:	Altura del c√digo de barras
Type:	CIAttributeTypeInteger

See AttributeinputBarcodeHeight for more details.
(Read and Write property)

4.45.9   inputMessage as Memoryblock

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Message
Notes:

Name:	inputMessage
Class:	Memoryblock (NSData)
DisplayName English:	Message
DisplayName German:	Nachricht
DisplayName French:	Message
DisplayName Italian:	Messaggio
DisplayName Spanish:	Mensaje

See AttributeinputMessage for more details.
(Read and Write property)

4.45.10   inputQuietSpace as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Quiet Space
Notes:

See AttributeinputQuietSpace for more details.
(Read and Write property)

Name:	inputQuietSpace
Class:	double (NSNumber)
DisplayName English:	Quiet Space
DisplayName German:	Ruheraum
DisplayName French:	Marge
DisplayName Italian:	Area non interattiva
DisplayName Spanish:	Espacio sin modificaciones
Type:	CIAttributeTypeInteger

4.46   class CIFilterColorAbsoluteDifferenceMBS

4.46.1   class CIFilterColorAbsoluteDifferenceMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Absolute Difference filter.
Notes: Details for this filter:

FilterName:	CIColorAbsoluteDifference
DisplayName English:	Color Absolute Difference
DisplayName German:	Absolute Farbdifferenz
DisplayName French:	Diff√©rence absolue des couleurs
DisplayName Italian:	Differenza assoluta colore
DisplayName Spanish:	Diferencia absoluta de color

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputImage2: Image2

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.46.2 Methods

4.46.3 Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.46.4 Properties

4.46.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Color Absolute Difference attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.46.6 AttributeinputImage2 as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Color Absolute Difference attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage2
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName:	Image2
DefaultNumber:	0
IdentityNumber:	0

4.46.7 inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.46.8 inputImage2 as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image2
Notes:

Name:	inputImage2
Class:	CIImageMBS (CIImage)
DisplayName English:	Image2
DisplayName German:	Image2
DisplayName French:	Image2
DisplayName Italian:	Image2
DisplayName Spanish:	Image2
Type:	CIAttributeTypeImage

See AttributeinputImage2 for more details.

(Read and Write property)

4.47   class CIFilterColorBlendModeMBS

4.47.1   class CIFilterColorBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Blend Mode filter.
Notes: Details for this filter:

FilterName:	CIColorBlendMode
DisplayName English:	Color Blend Mode
DisplayName German:	Mischmethode ‚ÄûFarbe‚Äú
DisplayName French:	Mode de fusion des couleurs
DisplayName Italian:	Modalit√† sfumatura colore
DisplayName Spanish:	Modo de mezcla de color

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.47.2 Methods

4.47.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.47.4 Properties

4.47.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.47.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.47.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.47.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.48   class CIFilterColorBurnBlendModeMBS

4.48.1   class CIFilterColorBurnBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Burn Blend Mode filter.
Notes: Details for this filter:

FilterName:	CIColorBurnBlendMode
DisplayName English:	Color Burn Blend Mode
DisplayName German:	Mischmethode ‚ÄûFarbig nachbelichten‚Äú
DisplayName French:	Mode de fusion Densit√© couleur
DisplayName Italian:	Modalit√† sfumatura colore bruciato
DisplayName Spanish:	Modo de mezcla por sobreexposici√n de color

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.48.2 Methods

4.48.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.48.4 Properties

4.48.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Burn Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.48.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Burn Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.48.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.48.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.49   class CIFilterColorClampMBS

4.49.1   class CIFilterColorClampMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Clamp filter.
Notes: Details for this filter:

FilterName:	CIColorClamp
DisplayName English:	Color Clamp
DisplayName German:	Color Clamp
DisplayName French:	Limitation de la couleur
DisplayName Italian:	Fissaggio colore
DisplayName Spanish:	Fijaci√n del color

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputMinComponents: Min Components

- inputMaxComponents: Max Components

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.49.2 Methods

4.49.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.49.4 Properties

4.49.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Clamp attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.49.6 AttributeinputMaxComponents as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Clamp attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputMaxComponents
Class:	CIVectorMBS
DisplayName English:	Max Components
DisplayName German:	Max. Komponenten
DisplayName French:	Composantes max.
DisplayName Italian:	Componenti Max
DisplayName Spanish:	M√°x. de componentes
DefaultVector:	[1 1 1 1]
IdentityVector:	n/a

4.49.7   AttributeinputMinComponents as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Clamp attribute.
Notes: This attribute should have this content:

Name:	inputMinComponents
Class:	CIVectorMBS
DisplayName English:	Min Components
DisplayName German:	Min. Komponenten
DisplayName French:	Composantes min.
DisplayName Italian:	Componenti Min
DisplayName Spanish:	M√n. de componentes
DefaultVector:	[0 0 0 0]
IdentityVector:	n/a

(Read only property)

4.49.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.49.9   inputMaxComponents as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Max Components
Notes:

Name:	inputMaxComponents
Class:	CIVectorMBS (CIVector)
DisplayName English:	Max Components
DisplayName German:	Max. Komponenten
DisplayName French:	Composantes max.
DisplayName Italian:	Componenti Max
DisplayName Spanish:	M√°x. de componentes

See AttributeinputMaxComponents for more details.
(Read and Write property)

4.49.10   inputMinComponents as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Min Components
Notes:

Name:	inputMinComponents
Class:	CIVectorMBS (CIVector)
DisplayName English:	Min Components
DisplayName German:	Min. Komponenten
DisplayName French:	Composantes min.
DisplayName Italian:	Componenti Min
DisplayName Spanish:	M√n. de componentes

See AttributeinputMinComponents for more details.

(Read and Write property)

4.50   class CIFilterColorControlsMBS

4.50.1   class CIFilterColorControlsMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Controls filter.
Notes: Details for this filter:

FilterName:	CIColorControls
DisplayName English:	Color Controls
DisplayName German:	Farbsteuerung
DisplayName French:	Contr√¥le des couleurs
DisplayName Italian:	Controlli colore
DisplayName Spanish:	Controles de color

Categories:

- CICategoryColorAdjustment: Color Adjustment
- CICategoryVideo: Video
- CICategoryStillImage: Still Image
- CICategoryInterlaced: Interlaced
- CICategoryNonSquarePixels: Non-Square Pixels
- CICategoryHighDynamicRange: High Dynamic Range
- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image
- inputSaturation: Saturation
- inputBrightness: Brightness
- inputContrast: Contrast

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.50.2   Methods

4.50.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.50.4   Properties

4.50.5   AttributeinputBrightness as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Controls attribute.
Notes: This attribute should have this content:

Name:	inputBrightness
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Brightness
DisplayName German:	Helligkeit
DisplayName French:	Luminosit√©
DisplayName Italian:	Luminosit√†
DisplayName Spanish:	Brillo
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	0
MinNumber:	-1
SliderMaxNumber:	1
SliderMinNumber:	-1

(Read only property)

4.50.6   AttributeinputContrast as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Controls attribute.
Notes: This attribute should have this content:

Name:	inputContrast
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Contrast
DisplayName German:	Kontrast
DisplayName French:	Contraste
DisplayName Italian:	Contrasto
DisplayName Spanish:	Contraste
DefaultNumber:	1
IdentityNumber:	1
SliderMaxNumber:	4
SliderMinNumber:	0.25

(Read only property)

4.50.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Controls attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.50.8   AttributeinputSaturation as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Controls attribute.
Notes: This attribute should have this content:

Name:	inputSaturation
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Saturation
DisplayName German:	S√§ttigung
DisplayName French:	Saturation
DisplayName Italian:	Saturazione
DisplayName Spanish:	Saturaci√n
DefaultNumber:	1
IdentityNumber:	1
SliderMaxNumber:	2
SliderMinNumber:	0

(Read only property)

4.50.9   inputBrightness as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Brightness
Notes:

Name:	inputBrightness
Class:	double (NSNumber)
DisplayName English:	Brightness
DisplayName German:	Helligkeit
DisplayName French:	Luminosit√©
DisplayName Italian:	Luminosit√†
DisplayName Spanish:	Brillo
Type:	CIAttributeTypeScalar

See AttributeinputBrightness for more details.
(Read and Write property)

4.50.10   inputContrast as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Contrast
Notes:

Name:	inputContrast
Class:	double (NSNumber)
DisplayName English:	Contrast
DisplayName German:	Kontrast
DisplayName French:	Contraste
DisplayName Italian:	Contrasto
DisplayName Spanish:	Contraste
Type:	CIAttributeTypeScalar

See AttributeinputContrast for more details.
(Read and Write property)

4.50.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.50.12   inputSaturation as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Saturation
Notes:

See AttributeinputSaturation for more details.
(Read and Write property)

Name:	inputSaturation
Class:	double (NSNumber)
DisplayName English:	Saturation
DisplayName German:	S√§ttigung
DisplayName French:	Saturation
DisplayName Italian:	Saturazione
DisplayName Spanish:	Saturaci√n
Type:	CIAttributeTypeScalar

4.51 class CIFilterColorCrossPolynomialMBS

4.51.1 class CIFilterColorCrossPolynomialMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Cross Polynomial filter.
Notes: Details for this filter:

FilterName:	CIColorCrossPolynomial
DisplayName English:	Color Cross Polynomial
DisplayName German:	Farb√ºberblend-Polynom
DisplayName French:	Fonction polynomiale crois√©e de couleur
DisplayName Italian:	Polinomio cromatico incrociato
DisplayName Spanish:	Polinomio cruzado crom√°tico

Categories:

- CICategoryColorEffect: Color Effect
- CICategoryVideo: Video
- CICategoryInterlaced: Interlaced
- CICategoryNonSquarePixels: Non-Square Pixels
- CICategoryStillImage: Still Image
- CICategoryHighDynamicRange: High Dynamic Range
- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image
- inputRedCoefficients: Red Coefficients
- inputGreenCoefficients: Green Coefficients
- inputBlueCoefficients: Blue Coefficients

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.51.2   Methods

4.51.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.51.4   Properties

4.51.5   AttributeinputBlueCoefficients as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cross Polynomial attribute.
Notes: This attribute should have this content:

Name:	inputBlueCoefficients
Class:	CIVectorMBS
DisplayName English:	Blue Coefficients
DisplayName German:	Blau-Koeffizienten
DisplayName French:	Coefficients Bleu
DisplayName Italian:	Coefficienti colore blu
DisplayName Spanish:	Coeficientes de azul
DefaultVector:	[0 0 1 0 0 0 0 0 0 0]
IdentityVector:	[0 0 1 0 0 0 0 0 0 0]

(Read only property)

4.51.6   AttributeinputGreenCoefficients as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cross Polynomial attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputGreenCoefficients
Class:	CIVectorMBS
DisplayName English:	Green Coefficients
DisplayName German:	Gr√°n-Koeffizienten
DisplayName French:	Coefficients Vert
DisplayName Italian:	Coefficienti colore verde
DisplayName Spanish:	Coeficientes de verde
DefaultVector:	[0 1 0 0 0 0 0 0 0]
IdentityVector:	[0 1 0 0 0 0 0 0 0]

4.51.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cross Polynomial attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.51.8   AttributeinputRedCoefficients as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cross Polynomial attribute.
Notes: This attribute should have this content:

(Read only property)

Name: inputRedCoefficients
Class: CIVectorMBS
DisplayName English: Red Coefficients
DisplayName German: Rot-Koeffizienten
DisplayName French: Coefficients Rouge
DisplayName Italian: Coefficienti colore rosso
DisplayName Spanish: Coeficientes de rojo
DefaultVector: [1 0 0 0 0 0 0 0 0 0]
IdentityVector: [1 0 0 0 0 0 0 0 0 0]

4.51.9   inputBlueCoefficients as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Blue Coefficients
Notes:

Name: inputBlueCoefficients
Class: CIVectorMBS (CIVector)
DisplayName English: Blue Coefficients
DisplayName German: Blau-Koeffizienten
DisplayName French: Coefficients Bleu
DisplayName Italian: Coefficienti colore blu
DisplayName Spanish: Coeficientes de azul

See AttributeinputBlueCoefficients for more details.
(Read and Write property)

4.51.10   inputGreenCoefficients as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Green Coefficients
Notes:

Name: inputGreenCoefficients
Class: CIVectorMBS (CIVector)
DisplayName English: Green Coefficients
DisplayName German: Gr√ºn-Koeffizienten
DisplayName French: Coefficients Vert
DisplayName Italian: Coefficienti colore verde
DisplayName Spanish: Coeficientes de verde

See AttributeinputGreenCoefficients for more details.
(Read and Write property)

4.51.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.51.12   inputRedCoefficients as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Red Coefficients
Notes:

Name:	inputRedCoefficients
Class:	CIVectorMBS (CIVector)
DisplayName English:	Red Coefficients
DisplayName German:	Rot-Koeffizienten
DisplayName French:	Coefficients Rouge
DisplayName Italian:	Coefficienti colore rosso
DisplayName Spanish:	Coeficientes de rojo

See AttributeinputRedCoefficients for more details.
(Read and Write property)

4.52   class CIFilterColorCubeMBS

4.52.1   class CIFilterColorCubeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Cube filter.
Notes: Details for this filter:

FilterName:	CIColorCube
DisplayName English:	Color Cube
DisplayName German:	Farbw√ºrfel
DisplayName French:	Cube de couleur
DisplayName Italian:	Cubo colore
DisplayName Spanish:	Cubo de color

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputCubeDimension: Cube Dimension

- inputCubeData: Cube Data

- inputExtrapolate: Extrapolate

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.52.2   Methods

4.52.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.52.4   Properties

4.52.5   AttributeinputCubeData as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cube attribute.
Notes: This attribute should have this content:

Name:	inputCubeData
Class:	Memoryblock
DisplayName English:	Cube Data
DisplayName German:	W√ºrfeldaten
DisplayName French:	Donn√©es du cube
DisplayName Italian:	Dati cubo
DisplayName Spanish:	Datos del cubo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.52.6   AttributeinputCubeDimension as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cube attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCubeDimension
Class:	double
Type:	CIAttributeTypeCount
DisplayName English:	Cube Dimension
DisplayName German:	W√°rfelma√üe
DisplayName French:	Dimension du cube
DisplayName Italian:	Dimensione cubo
DisplayName Spanish:	Dimensi√n del cubo
DefaultNumber:	2
IdentityNumber:	2
MaxNumber:	128
MinNumber:	2

4.52.7   AttributeinputExtrapolate as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Color Cube attribute.
Notes: This attribute should have this content:

Name:	inputExtrapolate
Class:	double
Type:	CIAttributeTypeBoolean
DisplayName English:	Extrapolate
DisplayName German:	Extrapolieren
DisplayName French:	Extrapoler
DisplayName Italian:	Estrapola
DisplayName Spanish:	Extrapolar
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0

(Read only property)

4.52.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cube attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.52.9 inputCubeData as Memoryblock

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Cube Data
Notes:

Name:	inputCubeData
Class:	Memoryblock (NSData)
DisplayName English:	Cube Data
DisplayName German:	W√ºrfeldaten
DisplayName French:	Donn√©es du cube
DisplayName Italian:	Dati cubo
DisplayName Spanish:	Datos del cubo

See AttributeinputCubeData for more details.
(Read and Write property)

4.52.10 inputCubeDimension as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Cube Dimension
Notes:

See AttributeinputCubeDimension for more details.
(Read and Write property)

Name:	inputCubeDimension
Class:	double (NSNumber)
DisplayName English:	Cube Dimension
DisplayName German:	W√°rfelma√üe
DisplayName French:	Dimension du cube
DisplayName Italian:	Dimensione cubo
DisplayName Spanish:	Dimensi√n del cubo
Type:	CIAttributeTypeCount

4.52.11   inputExtrapolate as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Extrapolate
Notes:

Name:	inputExtrapolate
Class:	double (NSNumber)
DisplayName English:	Extrapolate
DisplayName German:	Extrapolieren
DisplayName French:	Extrapoler
DisplayName Italian:	Estrapola
DisplayName Spanish:	Extrapolar
Type:	CIAttributeTypeBoolean

See AttributeinputExtrapolate for more details.
(Read and Write property)

4.52.12   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.53   class CIFilterColorCubesMixedWithMaskMBS

4.53.1   class CIFilterColorCubesMixedWithMaskMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Cubes Mixed With Mask filter.
Notes: Details for this filter:

FilterName:	CIColorCubesMixedWithMask
DisplayName English:	Color Cubes Mixed With Mask
DisplayName German:	Mit Maske gemischte Farbw√ºrfel
DisplayName French:	Cubes de couleur m√©lang√©s avec masque
DisplayName Italian:	Cubi di colori misti con maschera
DisplayName Spanish:	Cubos de color mezclados con la m√°scara

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputMaskImage: Mask Image

- inputCubeDimension: Cube Dimension

- inputCube0Data: Cube 0 Data

- inputCube1Data: Cube 1 Data

- inputColorSpace: Color Space

- inputExtrapolate: Extrapolate

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.53.2   Methods

4.53.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.53.4   Properties

4.53.5   AttributeinputColorSpace as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cubes Mixed With Mask attribute.
Notes: This attribute should have this content:

Name:	inputColorSpace
Class:	CGColorSpaceMBS
DisplayName English:	Color Space
DisplayName German:	Farbraum
DisplayName French:	Espace colorim√©trique
DisplayName Italian:	Spazio colore
DisplayName Spanish:	Espacio de color
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.53.6   AttributeinputCube0Data as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cubes Mixed With Mask attribute.
Notes: This attribute should have this content:

Name:	inputCube0Data
Class:	Memoryblock
DisplayName English:	Cube 0 Data
DisplayName German:	Daten W√ºrfel 0
DisplayName French:	Donn√©es du cube¬†0
DisplayName Italian:	Dati 0 cubo
DisplayName Spanish:	Datos del cubo 0
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.53.7   AttributeinputCube1Data as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cubes Mixed With Mask attribute.
Notes: This attribute should have this content:

Name:	inputCube1Data
Class:	Memoryblock
DisplayName English:	Cube 1 Data
DisplayName German:	Daten W√ºrfel 1
DisplayName French:	Donn√©es du cube¬†1
DisplayName Italian:	Dati 1 cubo
DisplayName Spanish:	Datos del cubo 1
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.53.8   AttributeinputCubeDimension as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cubes Mixed With Mask attribute.
Notes: This attribute should have this content:

Name:	inputCubeDimension
Class:	double
Type:	CIAttributeTypeCount
DisplayName English:	Cube Dimension
DisplayName German:	W√ºrfelma√üe
DisplayName French:	Dimension du cube
DisplayName Italian:	Dimensione cubo
DisplayName Spanish:	Dimensi√n del cubo
DefaultNumber:	2
IdentityNumber:	2
MaxNumber:	128
MinNumber:	2

(Read only property)

4.53.9   AttributeinputExtrapolate as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Color Cubes Mixed With Mask attribute.
Notes: This attribute should have this content:

Name:	inputExtrapolate
Class:	double
Type:	CIAttributeTypeBoolean
DisplayName English:	Extrapolate
DisplayName German:	Extrapolieren
DisplayName French:	Extrapoler
DisplayName Italian:	Estrapola
DisplayName Spanish:	Extrapolar
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0

(Read only property)

4.53.10   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cubes Mixed With Mask attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.53.11   AttributeinputMaskImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cubes Mixed With Mask attribute.
Notes: This attribute should have this content:

Name:	inputMaskImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Mask Image
DisplayName German:	Maske
DisplayName French:	Image du masque
DisplayName Italian:	Immagine maschera
DisplayName Spanish:	Imagen de m√°scara
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.53.12   inputColorSpace as CGColorSpaceMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color Space
Notes:

Name:	inputColorSpace
Class:	CGColorSpaceMBS (NSObject)
DisplayName English:	Color Space
DisplayName German:	Farbraum
DisplayName French:	Espace colorim√©trique
DisplayName Italian:	Spazio colore
DisplayName Spanish:	Espacio de color

See AttributeinputColorSpace for more details.
(Read and Write property)

4.53.13   inputCube0Data as Memoryblock

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Cube 0 Data
Notes:

Name:	inputCube0Data
Class:	Memoryblock (NSData)
DisplayName English:	Cube 0 Data
DisplayName German:	Daten W√ºrfel 0
DisplayName French:	Donn√©es du cube¬†0
DisplayName Italian:	Dati 0 cubo
DisplayName Spanish:	Datos del cubo 0

See AttributeinputCube0Data for more details.
(Read and Write property)

4.53.14   inputCube1Data as Memoryblock

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Cube 1 Data
Notes:

See AttributeinputCube1Data for more details.
(Read and Write property)

Name:	inputCube1Data
Class:	Memoryblock (NSData)
DisplayName English:	Cube 1 Data
DisplayName German:	Daten W√ºrfel 1
DisplayName French:	Donn√©es du cube¬†1
DisplayName Italian:	Dati 1 cubo
DisplayName Spanish:	Datos del cubo 1

4.53.15   inputCubeDimension as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Cube Dimension
Notes:

Name:	inputCubeDimension
Class:	double (NSNumber)
DisplayName English:	Cube Dimension
DisplayName German:	W√ºrfelma√üe
DisplayName French:	Dimension du cube
DisplayName Italian:	Dimensione cubo
DisplayName Spanish:	Dimensi√n del cubo
Type:	CIAttributeTypeCount

See AttributeinputCubeDimension for more details.
(Read and Write property)

4.53.16   inputExtrapolate as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Extrapolate
Notes:

Name:	inputExtrapolate
Class:	double (NSNumber)
DisplayName English:	Extrapolate
DisplayName German:	Extrapolieren
DisplayName French:	Extrapoler
DisplayName Italian:	Estrapola
DisplayName Spanish:	Extrapolar
Type:	CIAttributeTypeBoolean

See AttributeinputExtrapolate for more details.
(Read and Write property)

4.53.17 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.53.18 inputMaskImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Mask Image
Notes:

Name:	inputMaskImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Mask Image
DisplayName German:	Maske
DisplayName French:	Image du masque
DisplayName Italian:	Immagine maschera
DisplayName Spanish:	Imagen de m√°scara
Type:	CIAttributeTypeImage

See AttributeinputMaskImage for more details.
(Read and Write property)

4.54   class CIFilterColorCubeWithColorSpaceMBS

4.54.1   class CIFilterColorCubeWithColorSpaceMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Cube with ColorSpace filter.
Notes: Details for this filter:

FilterName:	CIColorCubeWithColorSpace
DisplayName English:	Color Cube with ColorSpace
DisplayName German:	Farbw√°rfel mit ColorSpace
DisplayName French:	Cube de couleur avec ColorSpace
DisplayName Italian:	Cubo colore con spazio colore
DisplayName Spanish:	Cubo de color con espacio de color

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputCubeDimension: Cube Dimension

- inputCubeData: Cube Data

- inputExtrapolate: Extrapolate

- inputColorSpace: Color Space

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.54.2 Methods

4.54.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.54.4 Properties

4.54.5 AttributeinputColorSpace as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cube with ColorSpace attribute.
Notes: This attribute should have this content:

Name:	inputColorSpace
Class:	CGColorSpaceMBS
DisplayName English:	Color Space
DisplayName German:	Farbraum
DisplayName French:	Espace colorim√©trique
DisplayName Italian:	Spazio colore
DisplayName Spanish:	Espacio de color
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.54.6 AttributeinputCubeData as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cube with ColorSpace attribute.
Notes: This attribute should have this content:

Name:	inputCubeData
Class:	Memoryblock
DisplayName English:	Cube Data
DisplayName German:	W√ºrfeldaten
DisplayName French:	Donn√©es du cube
DisplayName Italian:	Dati cubo
DisplayName Spanish:	Datos del cubo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.54.7   AttributeinputCubeDimension as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cube with ColorSpace attribute.
Notes: This attribute should have this content:

Name:	inputCubeDimension
Class:	double
Type:	CIAttributeTypeCount
DisplayName English:	Cube Dimension
DisplayName German:	W√ºrfelma√üe
DisplayName French:	Dimension du cube
DisplayName Italian:	Dimensione cubo
DisplayName Spanish:	Dimensi√n del cubo
DefaultNumber:	2
IdentityNumber:	2
MaxNumber:	128
MinNumber:	2

(Read only property)

4.54.8   AttributeinputExtrapolate as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Color Cube with ColorSpace attribute.
Notes: This attribute should have this content:

Name:	inputExtrapolate
Class:	double
DisplayName English:	Extrapolate
DisplayName German:	Extrapolieren
DisplayName French:	Extrapoler
DisplayName Italian:	Estrapola
DisplayName Spanish:	Extrapolar
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.54.9 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Cube with ColorSpace attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.54.10 inputColorSpace as CGColorSpaceMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color Space
Notes:

See AttributeinputColorSpace for more details.
(Read and Write property)

Name:	inputColorSpace
Class:	CGColorSpaceMBS (NSObject)
DisplayName English:	Color Space
DisplayName German:	Farbraum
DisplayName French:	Espace colorim√©trique
DisplayName Italian:	Spazio colore
DisplayName Spanish:	Espacio de color

4.54.11   inputCubeData as Memoryblock

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Cube Data
Notes:

Name:	inputCubeData
Class:	Memoryblock (NSData)
DisplayName English:	Cube Data
DisplayName German:	W√ºrfeldaten
DisplayName French:	Donn√©es du cube
DisplayName Italian:	Dati cubo
DisplayName Spanish:	Datos del cubo

See AttributeinputCubeData for more details.
(Read and Write property)

4.54.12   inputCubeDimension as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Cube Dimension
Notes:

Name:	inputCubeDimension
Class:	double (NSNumber)
DisplayName English:	Cube Dimension
DisplayName German:	W√ºrfelma√üe
DisplayName French:	Dimension du cube
DisplayName Italian:	Dimensione cubo
DisplayName Spanish:	Dimensi√n del cubo
Type:	CIAttributeTypeCount

See AttributeinputCubeDimension for more details.

(Read and Write property)

4.54.13 inputExtrapolate as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Extrapolate
Notes:

Name:	inputExtrapolate
Class:	double (NSNumber)
DisplayName English:	Extrapolate
DisplayName German:	Extrapolieren
DisplayName French:	Extrapoler
DisplayName Italian:	Estrapola
DisplayName Spanish:	Extrapolar

See AttributeinputExtrapolate for more details.
(Read and Write property)

4.54.14 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.55   class CIFilterColorCurvesMBS

4.55.1   class CIFilterColorCurvesMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Curves filter.
Notes: Details for this filter:

FilterName:	CIColorCurves
DisplayName English:	Color Curves
DisplayName German:	Farbkurven
DisplayName French:	Courbes de couleur
DisplayName Italian:	Curve colore
DisplayName Spanish:	Curvas de colores

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputCurvesData: Curves Data

- inputCurvesDomain: Curves Domain

- inputColorSpace: Color Space

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.55.2 Methods

4.55.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.55.4 Properties

4.55.5 AttributeinputColorSpace as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Curves attribute.
Notes: This attribute should have this content:

Name:	inputColorSpace
Class:	CGColorSpaceMBS
DisplayName English:	Color Space
DisplayName German:	Farbraum
DisplayName French:	Espace colorim√©trique
DisplayName Italian:	Spazio colore
DisplayName Spanish:	Espacio de color
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.55.6 AttributeinputCurvesData as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Curves attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCurvesData
Class:	Memoryblock
DisplayName English:	Curves Data
DisplayName German:	Kurvendaten
DisplayName French:	Donn√©es des courbes
DisplayName Italian:	Dati curve
DisplayName Spanish:	Datos de las curvas
DefaultNumber:	0
IdentityNumber:	0

4.55.7   AttributeinputCurvesDomain as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Curves attribute.
Notes: This attribute should have this content:

Name:	inputCurvesDomain
Class:	CIVectorMBS
DisplayName English:	Curves Domain
DisplayName German:	Kurven-Domain
DisplayName French:	Domaine des courbes
DisplayName Italian:	Dominio curve
DisplayName Spanish:	Dominio de curvas
DefaultVector:	[0 1]
IdentityVector:	n/a

(Read only property)

4.55.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Curves attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.55.9   inputColorSpace as CGColorSpaceMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color Space
Notes:

Name:	inputColorSpace
Class:	CGColorSpaceMBS (NSObject)
DisplayName English:	Color Space
DisplayName German:	Farbraum
DisplayName French:	Espace colorim√©trique
DisplayName Italian:	Spazio colore
DisplayName Spanish:	Espacio de color

See AttributeinputColorSpace for more details.
(Read and Write property)

4.55.10   inputCurvesData as Memoryblock

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Curves Data
Notes:

Name:	inputCurvesData
Class:	Memoryblock (NSData)
DisplayName English:	Curves Data
DisplayName German:	Kurvendaten
DisplayName French:	Donn√©es des courbes
DisplayName Italian:	Dati curve
DisplayName Spanish:	Datos de las curvas

See AttributeinputCurvesData for more details.
(Read and Write property)

4.55.11   inputCurvesDomain as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Curves Domain
Notes:

Name:	inputCurvesDomain
Class:	CIVectorMBS (CIVector)
DisplayName English:	Curves Domain
DisplayName German:	Kurven-Domain
DisplayName French:	Domaine des courbes
DisplayName Italian:	Dominio curve
DisplayName Spanish:	Dominio de curvas

See AttributeinputCurvesDomain for more details.
(Read and Write property)

4.55.12   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.56 class CIFilterColorDodgeBlendModeMBS

4.56.1 class CIFilterColorDodgeBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Dodge Blend Mode filter.
Notes: Details for this filter:

FilterName:	CIColorDodgeBlendMode
DisplayName English:	Color Dodge Blend Mode
DisplayName German:	Mischmethode ‚ÄûFarbig abwedeln‚Äú
DisplayName French:	Mode de fusion Densit√© couleur n√©gative
DisplayName Italian:	Modalit√† sfumatura colore schermato
DisplayName Spanish:	Modo de mezcla por evasi√n de color

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.56.2 Methods

4.56.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.56.4 Properties

4.56.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Dodge Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.56.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Dodge Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.56.7 inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.56.8 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.57 class CIFilterColorInvertMBS

4.57.1 class CIFilterColorInvertMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Invert filter.
Notes: Details for this filter:

FilterName:	CIColorInvert
DisplayName English:	Color Invert
DisplayName German:	Farbe umkehren
DisplayName French:	Inversion de couleur
DisplayName Italian:	Inversione colore
DisplayName Spanish:	Inversi√n de color

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.57.2   Methods

4.57.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.57.4   Properties

4.57.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Invert attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.57.6   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.58   class CIFilterColorMapMBS

4.58.1   class CIFilterColorMapMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Map filter.
Notes: Details for this filter:

FilterName:	CIColorMap
DisplayName English:	Color Map
DisplayName German:	Farbkarte
DisplayName French:	Carte de couleurs
DisplayName Italian:	Mappa colore
DisplayName Spanish:	Mapa de color

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputGradientImage: Gradient Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.58.2 Methods

4.58.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.58.4 Properties

4.58.5 AttributeinputGradientImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Map attribute.
Notes: This attribute should have this content:

Name:	inputGradientImage
Class:	CIImageMBS
Type:	CIAttributeTypeGradient
DisplayName English:	Gradient Image
DisplayName German:	Bild f√ºr Verlauf
DisplayName French:	Image du d√©grad√©
DisplayName Italian:	Immagine gradiente
DisplayName Spanish:	Imagen degradada
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.58.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Map attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.58.7   inputGradientImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Gradient Image
Notes:

Name:	inputGradientImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Gradient Image
DisplayName German:	Bild f√ºr Verlauf
DisplayName French:	Image du d√©grad√©
DisplayName Italian:	Immagine gradiente
DisplayName Spanish:	Imagen degradada
Type:	CIAttributeTypeGradient

See AttributeinputGradientImage for more details.
(Read and Write property)

4.58.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.59 class CIFilterColorMatrixMBS

4.59.1 class CIFilterColorMatrixMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Matrix filter.
Notes: Details for this filter:

FilterName:	CIColorMatrix
DisplayName English:	Color Matrix
DisplayName German:	Farbmatrix
DisplayName French:	Matrice de couleurs
DisplayName Italian:	Matrice colore
DisplayName Spanish:	Matriz de color

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputRVector: Red Vector

- inputGVector: Green Vector

- inputBVector: Blue Vector

- inputAVector: Alpha Vector

- inputBiasVector: Bias Vector

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.59.2 Methods

4.59.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.59.4 Properties

4.59.5 AttributeinputAVector as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Matrix attribute.
Notes: This attribute should have this content:

Name:	inputAVector
Class:	CIVectorMBS
DisplayName English:	Alpha Vector
DisplayName German:	Alpha-Vektor
DisplayName French:	Vecteur alpha
DisplayName Italian:	Vettore alfa
DisplayName Spanish:	Vector alfa
DefaultVector:	[0 0 0 1]
IdentityVector:	[0 0 0 1]

(Read only property)

4.59.6 AttributeinputBiasVector as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Matrix attribute.
Notes: This attribute should have this content:

Name:	inputBiasVector
Class:	CIVectorMBS
DisplayName English:	Bias Vector
DisplayName German:	Bias-Vektor
DisplayName French:	Vecteur de biais
DisplayName Italian:	Vettore BIAS
DisplayName Spanish:	Vector oblicuo
DefaultVector:	[0 0 0 0]
IdentityVector:	[0 0 0 0]

(Read only property)

4.59.7   AttributeinputBVector as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Matrix attribute.
Notes: This attribute should have this content:

Name:	inputBVector
Class:	CIVectorMBS
DisplayName English:	Blue Vector
DisplayName German:	Blau-Vektor
DisplayName French:	Vecteur bleu
DisplayName Italian:	Vettore blu
DisplayName Spanish:	Vector azul
DefaultVector:	[0 0 1 0]
IdentityVector:	[0 0 1 0]

(Read only property)

4.59.8   AttributeinputGVector as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Matrix attribute.
Notes: This attribute should have this content:

Name:	inputGVector
Class:	CIVectorMBS
DisplayName English:	Green Vector
DisplayName German:	Gr√°n-Vektor
DisplayName French:	Vecteur vert
DisplayName Italian:	Vettore verde
DisplayName Spanish:	Vector verde
DefaultVector:	[0 1 0 0]
IdentityVector:	[0 1 0 0]

(Read only property)

4.59.9   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Matrix attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.59.10   AttributeinputRVector as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Matrix attribute.
Notes: This attribute should have this content:

(Read only property)

Name: inputRVector
 Class: CIVectorMBS
 DisplayName English: Red Vector
 DisplayName German: Rot-Vektor
 DisplayName French: Vecteur rouge
 DisplayName Italian: Vettore rosso
 DisplayName Spanish: Vector rojo
 DefaultVector: [1 0 0 0]
 IdentityVector: [1 0 0 0]

4.59.11   inputAVector as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Alpha Vector
Notes:

Name: inputAVector
 Class: CIVectorMBS (CIVector)
 DisplayName English: Alpha Vector
 DisplayName German: Alpha-Vektor
 DisplayName French: Vecteur alpha
 DisplayName Italian: Vettore alfa
 DisplayName Spanish: Vector alfa

See AttributeinputAVector for more details.
(Read and Write property)

4.59.12   inputBiasVector as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bias Vector
Notes:

Name: inputBiasVector
 Class: CIVectorMBS (CIVector)
 DisplayName English: Bias Vector
 DisplayName German: Bias-Vektor
 DisplayName French: Vecteur de biais
 DisplayName Italian: Vettore BIAS
 DisplayName Spanish: Vector oblicuo

See AttributeinputBiasVector for more details.
(Read and Write property)

4.59.13 inputBVector as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Blue Vector
Notes:

Name:	inputBVector
Class:	CIVectorMBS (CIVector)
DisplayName English:	Blue Vector
DisplayName German:	Blau-Vektor
DisplayName French:	Vecteur bleu
DisplayName Italian:	Vettore blu
DisplayName Spanish:	Vector azul

See AttributeinputBVector for more details.
(Read and Write property)

4.59.14 inputGVector as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Green Vector
Notes:

Name:	inputGVector
Class:	CIVectorMBS (CIVector)
DisplayName English:	Green Vector
DisplayName German:	Gr√ºn-Vektor
DisplayName French:	Vecteur vert
DisplayName Italian:	Vettore verde
DisplayName Spanish:	Vector verde

See AttributeinputGVector for more details.
(Read and Write property)

4.59.15   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.59.16   inputRVector as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Red Vector
Notes:

Name:	inputRVector
Class:	CIVectorMBS (CIVector)
DisplayName English:	Red Vector
DisplayName German:	Rot-Vektor
DisplayName French:	Vecteur rouge
DisplayName Italian:	Vettore rosso
DisplayName Spanish:	Vector rojo

See AttributeinputRVector for more details.
(Read and Write property)

4.60 class CIFilterColorMonochromeMBS

4.60.1 class CIFilterColorMonochromeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Monochrome filter.
Notes: Details for this filter:

FilterName:	CIColorMonochrome
DisplayName English:	Color Monochrome
DisplayName German:	Einfarbig
DisplayName French:	Couleur monochrome
DisplayName Italian:	Colore monocromo
DisplayName Spanish:	Color monocromo

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputColor: Color

- inputIntensity: Intensity

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.60.2   Methods

4.60.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.60.4   Properties

4.60.5   AttributeinputColor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Monochrome attribute.
Notes: This attribute should have this content:

Name:	inputColor
Class:	CIColorMBS
Type:	CIAttributeTypeOpaqueColor
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
DefaultColor:	Red = 0.6, Green = 0.45, Blue = 0.3, Alpha = 1
IdentityNumber:	0

(Read only property)

4.60.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Monochrome attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.60.7 AttributeinputIntensity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Monochrome attribute.
Notes: This attribute should have this content:

Name:	inputIntensity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
DefaultNumber:	1
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.60.8 inputColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color
Notes:

See AttributeinputColor for more details.
(Read and Write property)

Name:	inputColor
Class:	CIColorMBS (CIColor)
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
Type:	CIAttributeTypeOpaqueColor

4.60.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.60.10   inputIntensity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Intensity
Notes:

Name:	inputIntensity
Class:	double (NSNumber)
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
Type:	CIAttributeTypeScalar

See AttributeinputIntensity for more details.
(Read and Write property)

4.61   class CIFilterColorPolynomialMBS

4.61.1   class CIFilterColorPolynomialMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Polynomial filter.
Notes: Details for this filter:

FilterName:	CIColorPolynomial
DisplayName English:	Color Polynomial
DisplayName German:	Farb-Polynom
DisplayName French:	Fonction polynomiale de la couleur
DisplayName Italian:	Polinomio cromatico
DisplayName Spanish:	Polinomio crom√°tico

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputRedCoefficients: Red Coefficients

- inputGreenCoefficients: Green Coefficients

- inputBlueCoefficients: Blue Coefficients

- inputAlphaCoefficients: Alpha Coefficients

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.61.2 Methods

4.61.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.61.4 Properties

4.61.5 AttributeinputAlphaCoefficients as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Polynomial attribute.
Notes: This attribute should have this content:

Name:	inputAlphaCoefficients
Class:	CIVectorMBS
DisplayName English:	Alpha Coefficients
DisplayName German:	Alpha-Koeffizienten
DisplayName French:	Coefficients Alpha
DisplayName Italian:	Coefficienti alfa
DisplayName Spanish:	Coeficientes alfa
DefaultVector:	[0 1 0 0]
IdentityVector:	[0 1 0 0]

(Read only property)

4.61.6 AttributeinputBlueCoefficients as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Polynomial attribute.
Notes: This attribute should have this content:

Name:	inputBlueCoefficients
Class:	CIVectorMBS
DisplayName English:	Blue Coefficients
DisplayName German:	Blau-Koeffizienten
DisplayName French:	Coefficients Bleu
DisplayName Italian:	Coefficienti colore blu
DisplayName Spanish:	Coeficientes de azul
DefaultVector:	[0 1 0 0]
IdentityVector:	[0 1 0 0]

(Read only property)

4.61.7   AttributeinputGreenCoefficients as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Polynomial attribute.
Notes: This attribute should have this content:

Name:	inputGreenCoefficients
Class:	CIVectorMBS
DisplayName English:	Green Coefficients
DisplayName German:	Gr√ºn-Koeffizienten
DisplayName French:	Coefficients Vert
DisplayName Italian:	Coefficienti colore verde
DisplayName Spanish:	Coeficientes de verde
DefaultVector:	[0 1 0 0]
IdentityVector:	[0 1 0 0]

(Read only property)

4.61.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Polynomial attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.61.9 AttributeinputRedCoefficients as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Polynomial attribute.
Notes: This attribute should have this content:

Name:	inputRedCoefficients
Class:	CIVectorMBS
DisplayName English:	Red Coefficients
DisplayName German:	Rot-Koeffizienten
DisplayName French:	Coefficients Rouge
DisplayName Italian:	Coefficienti colore rosso
DisplayName Spanish:	Coeficientes de rojo
DefaultVector:	[0 1 0 0]
IdentityVector:	[0 1 0 0]

(Read only property)

4.61.10 inputAlphaCoefficients as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Alpha Coefficients
Notes:

See AttributeinputAlphaCoefficients for more details.
(Read and Write property)

Name: inputAlphaCoefficients
Class: CIVectorMBS (CIVector)
DisplayName English: Alpha Coefficients
DisplayName German: Alpha-Koeffizienten
DisplayName French: Coefficients Alpha
DisplayName Italian: Coefficienti alfa
DisplayName Spanish: Coeficientes alfa

4.61.11   inputBlueCoefficients as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Blue Coefficients
Notes:

Name: inputBlueCoefficients
Class: CIVectorMBS (CIVector)
DisplayName English: Blue Coefficients
DisplayName German: Blau-Koeffizienten
DisplayName French: Coefficients Bleu
DisplayName Italian: Coefficienti colore blu
DisplayName Spanish: Coeficientes de azul

See AttributeinputBlueCoefficients for more details.
(Read and Write property)

4.61.12   inputGreenCoefficients as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Green Coefficients
Notes:

Name: inputGreenCoefficients
Class: CIVectorMBS (CIVector)
DisplayName English: Green Coefficients
DisplayName German: Gr√ºn-Koeffizienten
DisplayName French: Coefficients Vert
DisplayName Italian: Coefficienti colore verde
DisplayName Spanish: Coeficientes de verde

See AttributeinputGreenCoefficients for more details.
(Read and Write property)

4.61.13   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.61.14   inputRedCoefficients as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Red Coefficients
Notes:

Name:	inputRedCoefficients
Class:	CIVectorMBS (CIVector)
DisplayName English:	Red Coefficients
DisplayName German:	Rot-Koeffizienten
DisplayName French:	Coefficients Rouge
DisplayName Italian:	Coefficienti colore rosso
DisplayName Spanish:	Coeficientes de rojo

See AttributeinputRedCoefficients for more details.
(Read and Write property)

4.62   class CIFilterColorPosterizeMBS

4.62.1   class CIFilterColorPosterizeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Posterize filter.
Notes: Details for this filter:

FilterName:	CIColorPosterize
DisplayName English:	Color Posterize
DisplayName German:	Farbe aufl√sen
DisplayName French:	Post√©riser la couleur
DisplayName Italian:	Posterizzazione colore
DisplayName Spanish:	Posterizaci√n de color

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputLevels: Levels

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.62.2 Methods

4.62.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.62.4 Properties

4.62.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Posterize attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.62.6 AttributeinputLevels as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Color Posterize attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputLevels
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Levels
DisplayName German:	Werte
DisplayName French:	Niveaux
DisplayName Italian:	Livelli
DisplayName Spanish:	Niveles
DefaultNumber:	6
IdentityNumber:	300
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	30
SliderMinNumber:	2

4.62.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.62.8   inputLevels as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Levels
Notes:

See AttributeinputLevels for more details.
(Read and Write property)

Name:	inputLevels
Class:	double (NSNumber)
DisplayName English:	Levels
DisplayName German:	Werte
DisplayName French:	Niveaux
DisplayName Italian:	Livelli
DisplayName Spanish:	Niveles
Type:	CIAttributeTypeScalar

4.63   class CIFilterColorThresholdMBS

4.63.1   class CIFilterColorThresholdMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Threshold filter.
Notes: Details for this filter:

FilterName:	CIColorThreshold
DisplayName English:	Color Threshold
DisplayName German:	Farbschwellenwert
DisplayName French:	Seuil de coloration
DisplayName Italian:	Soglia colore
DisplayName Spanish:	Umbral de color

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputThreshold: Threshold

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.63.2 Methods

4.63.3 Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.63.4 Properties

4.63.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Color Threshold attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.63.6 AttributeinputThreshold as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Color Threshold attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputThreshold
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Threshold
DisplayName German:	Schwellenwert
DisplayName French:	Seuil
DisplayName Italian:	Soglia
DisplayName Spanish:	Umbral
DefaultNumber:	0.5
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.63.7   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.63.8   inputThreshold as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Threshold
Notes:

See AttributeinputThreshold for more details.
(Read and Write property)

Name:	inputThreshold
Class:	double (NSNumber)
DisplayName English:	Threshold
DisplayName German:	Schwellenwert
DisplayName French:	Seuil
DisplayName Italian:	Soglia
DisplayName Spanish:	Umbral
Type:	CIAttributeTypeScalar

4.64   class CIFilterColorThresholdOtsuMBS

4.64.1   class CIFilterColorThresholdOtsuMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Color Threshold Otsu filter.
Notes: Details for this filter:

FilterName:	CIColorThresholdOtsu
DisplayName English:	Color Threshold Otsu
DisplayName German:	Farbschwellenwert Otsu
DisplayName French:	Seuil de coloration selon la m√©thode d‚ÄôOtsu
DisplayName Italian:	Soglia colore Otsu
DisplayName Spanish:	Umbral de color Otsu

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.64.2 Methods

4.64.3 Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.64.4 Properties

4.64.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Color Threshold Otsu attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.64.6 inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.65 class CIFilterColumnAverageMBS

4.65.1 class CIFilterColumnAverageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Column Average filter.
Notes: Details for this filter:

FilterName:	CIColumnAverage
DisplayName English:	Column Average
DisplayName German:	Spaltendurchschnitt
DisplayName French:	Moyenne des colonnes
DisplayName Italian:	Media colonna
DisplayName Spanish:	Media de la columna

Categories:

- CICategoryReduction: Reduction

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputExtent: Extent

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.65.2 Methods

4.65.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.65.4 Properties

4.65.5 AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Column Average attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 640 80]
IdentityVector:	n/a

(Read only property)

4.65.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Column Average attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.65.7   inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.65.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.66   class CIFilterComicEffectMBS

4.66.1   class CIFilterComicEffectMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Comic Effect filter.
Notes: Details for this filter:

FilterName:	CIComicEffect
DisplayName English:	Comic Effect
DisplayName German:	Comic-Effekt
DisplayName French:	Effet comique
DisplayName Italian:	Effetto fumetto
DisplayName Spanish:	Efecto c√mic

Categories:

- CICategoryStylize: Stylize
- CICategoryVideo: Video
- CICategoryStillImage: Still Image
- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.66.2   Methods

4.66.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.66.4   Properties

4.66.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Comic Effect attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.66.6   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.67   class CIFilterConstantColorGeneratorMBS

4.67.1   class CIFilterConstantColorGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Constant Color filter.
Notes: Details for this filter:

FilterName:	CIConstantColorGenerator
DisplayName English:	Constant Color
DisplayName German:	Farbfl√§che
DisplayName French:	Couleur constante
DisplayName Italian:	Colore costante
DisplayName Spanish:	Color constante

Categories:

- CICategoryGenerator: Generator

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputColor: Color

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.67.2   Methods

4.67.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.67.4 Properties

4.67.5 AttributeinputColor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Constant Color attribute.
Notes: This attribute should have this content:

Name:	inputColor
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
DefaultColor:	Red = 1, Green = 0, Blue = 0, Alpha = 1
IdentityNumber:	0

(Read only property)

4.67.6 inputColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color
Notes:

Name:	inputColor
Class:	CIColorMBS (CIColor)
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
Type:	CIAttributeTypeColor

See AttributeinputColor for more details.
(Read and Write property)

4.68 class CIFilterConvertLabToRGBMBS

4.68.1 class CIFilterConvertLabToRGBMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Convert Lab to RGB filter.
Notes: Details for this filter:

FilterName:	CIConvertLabToRGB
DisplayName English:	Convert Lab to RGB
DisplayName German:	Lab in RGB konvertieren
DisplayName French:	Convertir Lab en RVB
DisplayName Italian:	Converti Lab in RGB
DisplayName Spanish:	Convertir Lab en RGB

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputNormalize: Normalize

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.68.2   Methods

4.68.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.68.4   Properties

4.68.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Convert Lab to RGB attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.68.6   AttributeinputNormalize as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Convert Lab to RGB attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputNormalize
Class:	double
Type:	CIAttributeTypeBoolean
DisplayName:	Normalize
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0

4.68.7   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.68.8   inputNormalize as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Normalize
Notes:

See AttributeinputNormalize for more details.
(Read and Write property)

Name:	inputNormalize
Class:	double (NSNumber)
DisplayName English:	Normalize
DisplayName German:	Normalize
DisplayName French:	Normalize
DisplayName Italian:	Normalize
DisplayName Spanish:	Normalize
Type:	CIAttributeTypeBoolean

4.69 class CIFilterConvertRGBtoLabMBS

4.69.1 class CIFilterConvertRGBtoLabMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Convert RGB to Lab filter.
Notes: Details for this filter:

FilterName:	CIConvertRGBtoLab
DisplayName English:	Convert RGB to Lab
DisplayName German:	RGB in Lab konvertieren
DisplayName French:	Convertir RVB en Lab
DisplayName Italian:	Converti RGB in Lab
DisplayName Spanish:	Convertir RGB en Lab

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputNormalize: Normalize

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.69.2   Methods

4.69.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.69.4   Properties

4.69.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Convert RGB to Lab attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.69.6   AttributeinputNormalize as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Convert RGB to Lab attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputNormalize
Class:	double
Type:	CIAttributeTypeBoolean
DisplayName:	Normalize
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0

4.69.7   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.69.8   inputNormalize as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Normalize
Notes:

See AttributeinputNormalize for more details.
(Read and Write property)

Name:	inputNormalize
Class:	double (NSNumber)
DisplayName English:	Normalize
DisplayName German:	Normalize
DisplayName French:	Normalize
DisplayName Italian:	Normalize
DisplayName Spanish:	Normalize
Type:	CIAttributeTypeBoolean

4.70 class CIFilterConvolution3X3MBS

4.70.1 class CIFilterConvolution3X3MBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage 3 by 3 Convolution filter.
Notes: Details for this filter:

FilterName:	CIConvolution3X3
DisplayName English:	3 by 3 Convolution
DisplayName German:	3 x 3-Faltung
DisplayName French:	Convolution¬†3 par¬†3
DisplayName Italian:	Convoluzione 3 per 3
DisplayName Spanish:	Convoluci√n de 3x3

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputWeights: Weights

- inputBias: Bias

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.70.2   Methods

4.70.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.70.4   Properties

4.70.5   AttributeinputBias as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the 3 by 3 Convolution attribute.
Notes: This attribute should have this content:

Name:	inputBias
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Bias
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.70.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the 3 by 3 Convolution attribute.
Notes: This attribute should have this content:

(Read only property)

4.70.7   AttributeinputWeights as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the 3 by 3 Convolution attribute.
Notes: This attribute should have this content:

Name:	inputWeights
Class:	CIVectorMBS
DisplayName:	Weights
DefaultVector:	[0 0 0 0 1 0 0 0 0]
IdentityVector:	[0 0 0 0 1 0 0 0 0]

(Read only property)

4.70.8   inputBias as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bias
Notes:

Name:	inputBias
Class:	double (NSNumber)
DisplayName English:	Bias
DisplayName German:	Bias
DisplayName French:	Bias
DisplayName Italian:	Bias
DisplayName Spanish:	Bias
Type:	CIAttributeTypeScalar

See AttributeinputBias for more details.
(Read and Write property)

4.70.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.70.10   inputWeights as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Weights
Notes:

Name:	inputWeights
Class:	CIVectorMBS (CIVector)
DisplayName English:	Weights
DisplayName German:	Weights
DisplayName French:	Weights
DisplayName Italian:	Weights
DisplayName Spanish:	Weights

See AttributeinputWeights for more details.
(Read and Write property)

4.71   class CIFilterConvolution5X5MBS

4.71.1   class CIFilterConvolution5X5MBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage 5 by 5 Convolution filter.
Notes: Details for this filter:

FilterName:	CIConvolution5X5
DisplayName English:	5 by 5 Convolution
DisplayName German:	5 x 5-Faltung
DisplayName French:	Convolution¬†5 par¬†5
DisplayName Italian:	Convoluzione 5 per 5
DisplayName Spanish:	Convoluci√n de 5x5

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputWeights: Weights

- inputBias: Bias

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.71.2 Methods

4.71.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.71.4 Properties

4.71.5 AttributeinputBias as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the 5 by 5 Convolution attribute.
Notes: This attribute should have this content:

Name:	inputBias
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Bias
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.71.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the 5 by 5 Convolution attribute.
Notes: This attribute should have this content:

(Read only property)

4.71.7 AttributeinputWeights as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the 5 by 5 Convolution attribute.
Notes: This attribute should have this content:

Name:	inputWeights
Class:	CIVectorMBS
DisplayName:	Weights
DefaultVector:	[0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0]
IdentityVector:	[0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0]

(Read only property)

4.71.8   inputBias as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bias
Notes:

Name:	inputBias
Class:	double (NSNumber)
DisplayName English:	Bias
DisplayName German:	Bias
DisplayName French:	Bias
DisplayName Italian:	Bias
DisplayName Spanish:	Bias
Type:	CIAttributeTypeScalar

See AttributeinputBias for more details.
(Read and Write property)

4.71.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.71.10   inputWeights as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Weights
Notes:

Name:	inputWeights
Class:	CIVectorMBS (CIVector)
DisplayName English:	Weights
DisplayName German:	Weights
DisplayName French:	Weights
DisplayName Italian:	Weights
DisplayName Spanish:	Weights

See AttributeinputWeights for more details.
(Read and Write property)

4.72 class CIFilterConvolution7X7MBS

4.72.1 class CIFilterConvolution7X7MBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage 7 by 7 Convolution filter.
Notes: Details for this filter:

FilterName:	CIConvolution7X7
DisplayName English:	7 by 7 Convolution
DisplayName German:	7 x 7-Faltung
DisplayName French:	Convolution¬†7 par¬†7
DisplayName Italian:	Convoluzione 7 per 7
DisplayName Spanish:	Convoluci√n de 7x7

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputWeights: Weights

- inputBias: Bias

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.72.2   Methods

4.72.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.72.4   Properties

4.72.5   AttributeinputBias as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the 7 by 7 Convolution attribute.
Notes: This attribute should have this content:

Name:	inputBias
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Bias
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.72.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the 7 by 7 Convolution attribute.
Notes: This attribute should have this content:

(Read only property)

4.72.7   AttributeinputWeights as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the 7 by 7 Convolution attribute.
Notes: This attribute should have this content:

Name:	inputWeights
Class:	CIVectorMBS
DisplayName:	Weights
DefaultVector:	[0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
IdentityVector:	[0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]

(Read only property)

4.72.8   inputBias as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bias
Notes:

Name:	inputBias
Class:	double (NSNumber)
DisplayName English:	Bias
DisplayName German:	Bias
DisplayName French:	Bias
DisplayName Italian:	Bias
DisplayName Spanish:	Bias
Type:	CIAttributeTypeScalar

See AttributeinputBias for more details.

(Read and Write property)

4.72.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.72.10   inputWeights as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Weights
Notes:

Name:	inputWeights
Class:	CIVectorMBS (CIVector)
DisplayName English:	Weights
DisplayName German:	Weights
DisplayName French:	Weights
DisplayName Italian:	Weights
DisplayName Spanish:	Weights

See AttributeinputWeights for more details.
(Read and Write property)

4.73 class CIFilterConvolution9HorizontalMBS

4.73.1 class CIFilterConvolution9HorizontalMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Horizontal 9 Convolution filter.
Notes: Details for this filter:

FilterName:	CIConvolution9Horizontal
DisplayName English:	Horizontal 9 Convolution
DisplayName German:	Horizontale 9-Faltung
DisplayName French:	Convolution¬†9 horizontale
DisplayName Italian:	Convoluzione orizzontale 9
DisplayName Spanish:	Convoluci√n horizontal con 9 valores

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputWeights: Weights

- inputBias: Bias

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.73.2   Methods

4.73.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.73.4   Properties

4.73.5   AttributeinputBias as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Horizontal 9 Convolution attribute.
Notes: This attribute should have this content:

Name:	inputBias
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Bias
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.73.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Horizontal 9 Convolution attribute.
Notes: This attribute should have this content:

(Read only property)

4.73.7   AttributeinputWeights as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the Horizontal 9 Convolution attribute.
Notes: This attribute should have this content:

Name:	inputWeights
Class:	CIVectorMBS
DisplayName:	Weights
DefaultVector:	[0 0 0 0 1 0 0 0 0]
IdentityVector:	[0 0 0 0 1 0 0 0 0]

(Read only property)

4.73.8   inputBias as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bias
Notes:

Name:	inputBias
Class:	double (NSNumber)
DisplayName English:	Bias
DisplayName German:	Bias
DisplayName French:	Bias
DisplayName Italian:	Bias
DisplayName Spanish:	Bias
Type:	CIAttributeTypeScalar

See AttributeinputBias for more details.
(Read and Write property)

4.73.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.73.10   inputWeights as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Weights
Notes:

Name:	inputWeights
Class:	CIVectorMBS (CIVector)
DisplayName English:	Weights
DisplayName German:	Weights
DisplayName French:	Weights
DisplayName Italian:	Weights
DisplayName Spanish:	Weights

See AttributeinputWeights for more details.
(Read and Write property)

4.74 class CIFilterConvolution9VerticalMBS

4.74.1 class CIFilterConvolution9VerticalMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Vertical 9 Convolution filter.
Notes: Details for this filter:

FilterName:	CIConvolution9Vertical
DisplayName English:	Vertical 9 Convolution
DisplayName German:	Vertikale 9-Faltung
DisplayName French:	Convolution¬†9 verticale
DisplayName Italian:	Convoluzione verticale 9
DisplayName Spanish:	Convoluci√n vertical con 9 valores

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputWeights: Weights

- inputBias: Bias

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.74.2   Methods

4.74.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.74.4   Properties

4.74.5   AttributeinputBias as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vertical 9 Convolution attribute.
Notes: This attribute should have this content:

Name:	inputBias
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Bias
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.74.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vertical 9 Convolution attribute.
Notes: This attribute should have this content:

(Read only property)

4.74.7   AttributeinputWeights as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the Vertical 9 Convolution attribute.
Notes: This attribute should have this content:

Name:	inputWeights
Class:	CIVectorMBS
DisplayName:	Weights
DefaultVector:	[0 0 0 0 1 0 0 0 0]
IdentityVector:	[0 0 0 0 1 0 0 0 0]

(Read only property)

4.74.8   inputBias as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bias
Notes:

Name:	inputBias
Class:	double (NSNumber)
DisplayName English:	Bias
DisplayName German:	Bias
DisplayName French:	Bias
DisplayName Italian:	Bias
DisplayName Spanish:	Bias
Type:	CIAttributeTypeScalar

See AttributeinputBias for more details.
(Read and Write property)

4.74.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.74.10   inputWeights as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Weights
Notes:

Name:	inputWeights
Class:	CIVectorMBS (CIVector)
DisplayName English:	Weights
DisplayName German:	Weights
DisplayName French:	Weights
DisplayName Italian:	Weights
DisplayName Spanish:	Weights

See AttributeinputWeights for more details.
(Read and Write property)

4.75   class CIFilterConvolutionRGB3X3MBS

4.75.1   class CIFilterConvolutionRGB3X3MBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage 3 by 3 RGB Convolution filter.
Notes: Details for this filter:

FilterName:	CIConvolutionRGB3X3
DisplayName English:	3 by 3 RGB Convolution
DisplayName German:	3 x 3-RGB-Faltung
DisplayName French:	Convolution¬†RVB 3 par¬†3
DisplayName Italian:	Convoluzione RGB 3 per 3
DisplayName Spanish:	Convoluci√n RGB de 3x3

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputWeights: Weights

- inputBias: Bias

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.75.2   Methods

4.75.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.75.4   Properties

4.75.5   AttributeinputBias as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the 3 by 3 RGB Convolution attribute.
Notes: This attribute should have this content:

Name:	inputBias
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Bias
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.75.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the 3 by 3 RGB Convolution attribute.
Notes: This attribute should have this content:

(Read only property)

4.75.7   AttributeinputWeights as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the 3 by 3 RGB Convolution attribute.
Notes: This attribute should have this content:

Name:	inputWeights
Class:	CIVectorMBS
DisplayName:	Weights
DefaultVector:	[0 0 0 0 1 0 0 0 0]
IdentityVector:	[0 0 0 0 1 0 0 0 0]

(Read only property)

4.75.8   inputBias as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Bias
Notes:

Name:	inputBias
Class:	double (NSNumber)
DisplayName English:	Bias
DisplayName German:	Bias
DisplayName French:	Bias
DisplayName Italian:	Bias
DisplayName Spanish:	Bias
Type:	CIAttributeTypeScalar

See AttributeinputBias for more details.
(Read and Write property)

4.75.9   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.75.10   inputWeights as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Weights
Notes:

Name:	inputWeights
Class:	CIVectorMBS (CIVector)
DisplayName English:	Weights
DisplayName German:	Weights
DisplayName French:	Weights
DisplayName Italian:	Weights
DisplayName Spanish:	Weights

See AttributeinputWeights for more details.
(Read and Write property)

4.76 class CIFilterConvolutionRGB5X5MBS

4.76.1 class CIFilterConvolutionRGB5X5MBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage 5 by 5 RGB Convolution filter.
Notes: Details for this filter:

FilterName:	CIConvolutionRGB5X5
DisplayName English:	5 by 5 RGB Convolution
DisplayName German:	5 x 5-RGB-Faltung
DisplayName French:	Convolution¬†RVB 5 par¬†5
DisplayName Italian:	Convoluzione RGB 5 per 5
DisplayName Spanish:	Convoluci√n RGB de 5x5

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputWeights: Weights

- inputBias: Bias

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- [MBS Xojo Plugins, version 23.0pr5](#)

4.76.2   Methods

4.76.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.76.4   Properties

4.76.5   AttributeinputBias as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the 5 by 5 RGB Convolution attribute.
Notes: This attribute should have this content:

Name:	inputBias
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Bias
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.76.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the 5 by 5 RGB Convolution attribute.
Notes: This attribute should have this content:

(Read only property)

4.76.7   AttributeinputWeights as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the 5 by 5 RGB Convolution attribute.
Notes: This attribute should have this content:

Name:	inputWeights
Class:	CIVectorMBS
DisplayName:	Weights
DefaultVector:	[0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0]
IdentityVector:	[0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0]

(Read only property)

4.76.8   inputBias as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Bias
Notes:

Name:	inputBias
Class:	double (NSNumber)
DisplayName English:	Bias
DisplayName German:	Bias
DisplayName French:	Bias
DisplayName Italian:	Bias
DisplayName Spanish:	Bias
Type:	CIAttributeTypeScalar

See AttributeinputBias for more details.
(Read and Write property)

4.76.9   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.76.10   inputWeights as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Weights
Notes:

Name:	inputWeights
Class:	CIVectorMBS (CIVector)
DisplayName English:	Weights
DisplayName German:	Weights
DisplayName French:	Weights
DisplayName Italian:	Weights
DisplayName Spanish:	Weights

See AttributeinputWeights for more details.
(Read and Write property)

4.77 class CIFilterConvolutionRGB7X7MBS

4.77.1 class CIFilterConvolutionRGB7X7MBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage 7 by 7 RGB Convolution filter.
Notes: Details for this filter:

FilterName:	CIConvolutionRGB7X7
DisplayName English:	7 by 7 RGB Convolution
DisplayName German:	7 x 7-RGB-Faltung
DisplayName French:	Convolution¬†RVB 7 par¬†7
DisplayName Italian:	Convoluzione RGB 7 per 7
DisplayName Spanish:	Convoluci√n RGB de 7x7

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputWeights: Weights

- inputBias: Bias

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.77.2   Methods

4.77.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.77.4   Properties

4.77.5   AttributeinputBias as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the 7 by 7 RGB Convolution attribute.
Notes: This attribute should have this content:

Name:	inputBias
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Bias
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.77.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the 7 by 7 RGB Convolution attribute.
Notes: This attribute should have this content:

(Read only property)

4.77.7   AttributeinputWeights as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the 7 by 7 RGB Convolution attribute.
Notes: This attribute should have this content:

Name:	inputWeights
Class:	CIVectorMBS
DisplayName:	Weights
DefaultVector:	[0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
IdentityVector:	[0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]

(Read only property)

4.77.8   inputBias as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Bias
Notes:

Name:	inputBias
Class:	double (NSNumber)
DisplayName English:	Bias
DisplayName German:	Bias
DisplayName French:	Bias
DisplayName Italian:	Bias
DisplayName Spanish:	Bias
Type:	CIAttributeTypeScalar

See AttributeinputBias for more details.

(Read and Write property)

4.77.9   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.77.10   inputWeights as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Weights
Notes:

Name:	inputWeights
Class:	CIVectorMBS (CIVector)
DisplayName English:	Weights
DisplayName German:	Weights
DisplayName French:	Weights
DisplayName Italian:	Weights
DisplayName Spanish:	Weights

See AttributeinputWeights for more details.
(Read and Write property)

4.78   class CIFilterConvolutionRGB9HorizontalMBS

4.78.1   class CIFilterConvolutionRGB9HorizontalMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Horizontal 9 RGB Convolution filter.
Notes: Details for this filter:

FilterName:	CIConvolutionRGB9Horizontal
DisplayName English:	Horizontal 9 RGB Convolution
DisplayName German:	Horizontale 9-RGB-Faltung
DisplayName French:	Convolution RVB¬†9 horizontale
DisplayName Italian:	Convoluzione orizzontale RGB 9
DisplayName Spanish:	Convoluci√n RGB horizontal con 9¬†valores

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputWeights: Weights

- inputBias: Bias

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.78.2   Methods

4.78.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.78.4   Properties

4.78.5   AttributeinputBias as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Horizontal 9 RGB Convolution attribute.
Notes: This attribute should have this content:

Name:	inputBias
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Bias
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.78.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Horizontal 9 RGB Convolution attribute.
Notes: This attribute should have this content:

(Read only property)

4.78.7   AttributeinputWeights as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the Horizontal 9 RGB Convolution attribute.
Notes: This attribute should have this content:

Name:	inputWeights
Class:	CIVectorMBS
DisplayName:	Weights
DefaultVector:	[0 0 0 0 1 0 0 0 0]
IdentityVector:	[0 0 0 0 1 0 0 0 0]

(Read only property)

4.78.8   inputBias as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Bias
Notes:

Name:	inputBias
Class:	double (NSNumber)
DisplayName English:	Bias
DisplayName German:	Bias
DisplayName French:	Bias
DisplayName Italian:	Bias
DisplayName Spanish:	Bias
Type:	CIAttributeTypeScalar

See AttributeinputBias for more details.
(Read and Write property)

4.78.9   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.78.10   inputWeights as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Weights
Notes:

Name:	inputWeights
Class:	CIVectorMBS (CIVector)
DisplayName English:	Weights
DisplayName German:	Weights
DisplayName French:	Weights
DisplayName Italian:	Weights
DisplayName Spanish:	Weights

See AttributeinputWeights for more details.
(Read and Write property)

4.79 class CIFilterConvolutionRGB9VerticalMBS

4.79.1 class CIFilterConvolutionRGB9VerticalMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Vertical 9 RGB Convolution filter.
Notes: Details for this filter:

FilterName:	CIConvolutionRGB9Vertical
DisplayName English:	Vertical 9 RGB Convolution
DisplayName German:	Vertikale 9-RGB-Faltung
DisplayName French:	Convolution RVB 9¬†verticale
DisplayName Italian:	Convoluzione verticale RGB 9
DisplayName Spanish:	Convoluci√n RGB vertical con 9¬†valores

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputWeights: Weights

- inputBias: Bias

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.79.2   Methods

4.79.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.79.4   Properties

4.79.5   AttributeinputBias as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Vertical 9 RGB Convolution attribute.
Notes: This attribute should have this content:

Name:	inputBias
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Bias
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.79.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Vertical 9 RGB Convolution attribute.
Notes: This attribute should have this content:

(Read only property)

4.79.7   AttributeinputWeights as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the Vertical 9 RGB Convolution attribute.
Notes: This attribute should have this content:

Name:	inputWeights
Class:	CIVectorMBS
DisplayName:	Weights
DefaultVector:	[0 0 0 0 1 0 0 0 0]
IdentityVector:	[0 0 0 0 1 0 0 0 0]

(Read only property)

4.79.8 inputBias as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Bias
Notes:

Name:	inputBias
Class:	double (NSNumber)
DisplayName English:	Bias
DisplayName German:	Bias
DisplayName French:	Bias
DisplayName Italian:	Bias
DisplayName Spanish:	Bias
Type:	CIAttributeTypeScalar

See AttributeinputBias for more details.
(Read and Write property)

4.79.9   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.79.10   inputWeights as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Weights
Notes:

Name:	inputWeights
Class:	CIVectorMBS (CIVector)
DisplayName English:	Weights
DisplayName German:	Weights
DisplayName French:	Weights
DisplayName Italian:	Weights
DisplayName Spanish:	Weights

See AttributeinputWeights for more details.
(Read and Write property)

4.80 class CIFilterCopyMachineTransitionMBS

4.80.1 class CIFilterCopyMachineTransitionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Copy Machine filter.
Notes: Details for this filter:

FilterName:	CICopyMachineTransition
DisplayName English:	Copy Machine
DisplayName German:	Kopieren
DisplayName French:	Photocopieur
DisplayName Italian:	Fotocopiatrice
DisplayName Spanish:	Copiar m√°quina

Categories:

- CICategoryTransition: Transition

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTargetImage: Target Image

- inputExtent: Extent

- inputColor: Color

- inputTime: Time

- inputAngle: Angle

- inputWidth: Width

- inputOpacity: Opacity

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.80.2   Methods

4.80.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.80.4   Properties

4.80.5   AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Copy Machine attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	6.283185
SliderMinNumber:	0

(Read only property)

4.80.6 AttributeinputColor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Copy Machine attribute.
Notes: This attribute should have this content:

Name:	inputColor
Class:	CIColorMBS
Type:	CIAttributeTypeOpaqueColor
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
DefaultColor:	Red = 0.6, Green = 1, Blue = 0.8, Alpha = 1
IdentityNumber:	0

(Read only property)

4.80.7 AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Copy Machine attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	$\sqrt{}$âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 300 300]
IdentityVector:	n/a

(Read only property)

4.80.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Copy Machine attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.80.9   AttributeinputOpacity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Copy Machine attribute.
Notes: This attribute should have this content:

Name:	inputOpacity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Opacity
DisplayName German:	Deckkraft
DisplayName French:	Opacit√©
DisplayName Italian:	Opacit√†
DisplayName Spanish:	Opacidad
DefaultNumber:	1.3
IdentityNumber:	1.3
SliderMaxNumber:	3
SliderMinNumber:	0

(Read only property)

4.80.10 AttributeinputTargetImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Copy Machine attribute.
Notes: This attribute should have this content:

Name:	inputTargetImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.80.11 AttributeinputTime as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Copy Machine attribute.
Notes: This attribute should have this content:

Name:	inputTime
Class:	double
Type:	CIAttributeTypeTime
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.80.12   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Copy Machine attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	200
IdentityNumber:	200
MaxNumber:	0
MinNumber:	0.1
SliderMaxNumber:	500
SliderMinNumber:	0.1

(Read only property)

4.80.13   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.

(Read and Write property)

4.80.14 inputColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color
Notes:

Name:	inputColor
Class:	CIColorMBS (CIColor)
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
Type:	CIAttributeTypeOpaqueColor

See AttributeinputColor for more details.
(Read and Write property)

4.80.15 inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.80.16   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.80.17   inputOpacity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Opacity
Notes:

Name:	inputOpacity
Class:	double (NSNumber)
DisplayName English:	Opacity
DisplayName German:	Deckkraft
DisplayName French:	Opacit√©
DisplayName Italian:	Opacit√†
DisplayName Spanish:	Opacidad
Type:	CIAttributeTypeScalar

See AttributeinputOpacity for more details.
(Read and Write property)

4.80.18   inputTargetImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Target Image
Notes:

Name:	inputTargetImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
Type:	CIAttributeTypeImage

See AttributeinputTargetImage for more details.
(Read and Write property)

4.80.19   inputTime as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Time
Notes:

Name:	inputTime
Class:	double (NSNumber)
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
Type:	CIAttributeTypeTime

See AttributeinputTime for more details.
(Read and Write property)

4.80.20   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

See AttributeinputWidth for more details.
(Read and Write property)

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

4.81   class CIFilterCoreMLModelFilterMBS

4.81.1   class CIFilterCoreMLModelFilterMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage CoreML Model Filter filter.
Notes: Details for this filter:

FilterName:	CICoreMLModelFilter
DisplayName English:	CoreML Model Filter
DisplayName German:	CoreML-Modellfilter
DisplayName French:	Filtre de mod√®le CoreML
DisplayName Italian:	Filtro modello CoreML
DisplayName Spanish:	Filtro de modelo CoreML

Categories:

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryStylize: Stylize

Input:

- inputImage: Image

- inputModel: Model

- inputHeadIndex: Head Index

- inputSoftmaxNormalization: Softmax Normalization

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.81.2 Methods

4.81.3 Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.81.4 Properties

4.81.5 AttributeinputHeadIndex as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the CoreML Model Filter attribute.
Notes: This attribute should have this content:

Name:	inputHeadIndex
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Head Index
DisplayName German:	HitzeIndex
DisplayName French:	Index des t√™tes
DisplayName Italian:	Indice di testa
DisplayName Spanish:	√çndice de cabeza
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	10
MinNumber:	0

(Read only property)

4.81.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the CoreML Model Filter attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.81.7 AttributeinputModel as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the CoreML Model Filter attribute.
Notes: This attribute should have this content:

Name:	inputModel
Class:	
DisplayName English:	Model
DisplayName German:	Modell
DisplayName French:	Mod√®le
DisplayName Italian:	Modello
DisplayName Spanish:	Modelo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.81.8 AttributeinputSoftmaxNormalization as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the CoreML Model Filter attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputSoftmaxNormalization
Class:	double
Type:	CIAttributeTypeBoolean
DisplayName English:	Softmax Normalization
DisplayName German:	Softmax-Normalisierung
DisplayName French:	Normalisation Softmax
DisplayName Italian:	Normalizzazione softmax
DisplayName Spanish:	Normalizaci√n softmax
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0

4.81.9   inputHeadIndex as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Head Index
Notes:

Name:	inputHeadIndex
Class:	double (NSNumber)
DisplayName English:	Head Index
DisplayName German:	HitzeIndex
DisplayName French:	Index des t√™tes
DisplayName Italian:	Indice di testa
DisplayName Spanish:	√çndice de cabeza
Type:	CIAttributeTypeInteger

See AttributeinputHeadIndex for more details.
(Read and Write property)

4.81.10   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.81.11 inputModel as Variant

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Model
Notes:

Name:	inputModel
Class:	(MLModel)
DisplayName English:	Model
DisplayName German:	Modell
DisplayName French:	Mod√®le
DisplayName Italian:	Modello
DisplayName Spanish:	Modelo

See AttributeinputModel for more details.
(Read and Write property)

4.81.12 inputSoftmaxNormalization as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Softmax Normalization
Notes:

Name:	inputSoftmaxNormalization
Class:	double (NSNumber)
DisplayName English:	Softmax Normalization
DisplayName German:	Softmax-Normalisierung
DisplayName French:	Normalisation Softmax
DisplayName Italian:	Normalizzazione softmax
DisplayName Spanish:	Normalizaci√n softmax
Type:	CIAttributeTypeBoolean

See AttributeinputSoftmaxNormalization for more details.
(Read and Write property)

4.82 class CIFilterCropMBS

4.82.1 class CIFilterCropMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Crop filter.
Notes: Details for this filter:

FilterName:	CICrop
DisplayName English:	Crop
DisplayName German:	Freistellen
DisplayName French:	Recadrer
DisplayName Italian:	Ritaglia
DisplayName Spanish:	Recortar

Categories:

- CICategoryGeometryAdjustment: Geometry Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputRectangle: Rectangle

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.82.2   Methods

4.82.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.82.4   Properties

4.82.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Crop attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.82.6   AttributeinputRectangle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Crop attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRectangle
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Rectangle
DisplayName German:	Rechteck
DisplayName French:	Rectangle
DisplayName Italian:	Rettangolo
DisplayName Spanish:	Rect√°ngulo
DefaultVector:	[-8.98847e+307 -8.98847e+307 1.79769e+308 1.79769e+308]
IdentityVector:	[-8.98847e+307 -8.98847e+307 1.79769e+308 1.79769e+308]

4.82.7 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.82.8 inputRectangle as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Rectangle
Notes:

See AttributeinputRectangle for more details.
(Read and Write property)

Name:	inputRectangle
Class:	CIVectorMBS (CIVector)
DisplayName English:	Rectangle
DisplayName German:	Rechteck
DisplayName French:	Rectangle
DisplayName Italian:	Rettangolo
DisplayName Spanish:	Rect√°ngulo
Type:	CIAttributeTypeRectangle

4.83 class CIFilterCrystallizeMBS

4.83.1 class CIFilterCrystallizeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Crystallize filter.
Notes: Details for this filter:

FilterName:	CICrystallize
DisplayName English:	Crystallize
DisplayName German:	Kristallisieren
DisplayName French:	Cristalliser
DisplayName Italian:	Cristallizzazione
DisplayName Spanish:	Cristalizaci√n

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputRadius: Radius

- inputCenter: Center

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.83.2   Methods

4.83.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.83.4   Properties

4.83.5   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Crystallize attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.83.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Crystallize attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.83.7 AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Crystallize attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	20
IdentityNumber:	1
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	100
SliderMinNumber:	1

(Read only property)

4.83.8 inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

(Read and Write property)

4.83.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.83.10   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

4.84   class CIFilterDarkenBlendModeMBS

4.84.1   class CIFilterDarkenBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Darken Blend Mode filter.
Notes: Details for this filter:

FilterName:	CIDarkenBlendMode
DisplayName English:	Darken Blend Mode
DisplayName German:	Mischmethode ‚ÄûAbdunkeln‚Äú
DisplayName French:	Mode de fusion Assombrir
DisplayName Italian:	Modalit√† sfumatura scura
DisplayName Spanish:	Oscurecer modo de mezcla

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.84.2 Methods

4.84.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.84.4 Properties

4.84.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Darken Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.84.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Darken Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.84.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.84.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.85   class CIFilterDepthBlurEffectMBS

4.85.1   class CIFilterDepthBlurEffectMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Depth Blur Effect filter.
Notes: Details for this filter:

FilterName:	CIDepthBlurEffect
DisplayName English:	Depth Blur Effect
DisplayName German:	Tiefenweichzeichneneffekt
DisplayName French:	Effet de flou de profondeur
DisplayName Italian:	Effetto sfocatura profondit√†
DisplayName Spanish:	Efecto de profundidad desenfocado

Categories:

- CICategoryBlur: Blur

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputDisparityImage: Disparity Image

- inputMatteImage: Matte Image

- inputHairImage: Hair Image

- inputGlassesImage: Glasses Image

- inputGainMap: Gain Map

- inputAperture: Aperture

- inputLeftEyePositions: Left Eye Positions

- inputRightEyePositions: Right Eye Positions

- inputChinPositions: Chin Positions

- inputNosePositions: Nose Positions

- inputFocusRect: Focus Rectangle

- inputLumaNoiseScale: Luma Noise Scale

- inputScaleFactor: Scale Factor

- inputCalibrationData: Calibration Data

- inputAuxDataMetadata: Aux Data Metadata

- inputShape: Shape

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.85.2   Methods

4.85.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.85.4   Properties

4.85.5   AttributeinputAperture as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputAperture
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Aperture
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	22
MinNumber:	0
SliderMaxNumber:	22
SliderMinNumber:	1

4.85.6   AttributeinputAuxDataMetadata as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

Name:	inputAuxDataMetadata
Class:	CGImageMetadataMBS
DisplayName English:	Aux Data Metadata
DisplayName German:	Hilfsdaten –Metadaten
DisplayName French:	M√©tadonn√©es des donn√©es auxiliaires
DisplayName Italian:	Metadati dati canale
DisplayName Spanish:	Metadatos auxiliares
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.85.7   AttributeinputCalibrationData as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCalibrationData
Class:	Variant
DisplayName English:	Calibration Data
DisplayName German:	Kalibrierungsdaten
DisplayName French:	Donn√©es d‚Äô√©talonnage
DisplayName Italian:	Dati di calibrazione
DisplayName Spanish:	Datos de calibraci√n

4.85.8   AttributeinputChinPositions as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

Name:	inputChinPositions
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Chin Positions
DisplayName German:	Kinnpositionen
DisplayName French:	Positions du menton
DisplayName Italian:	Posizioni mento
DisplayName Spanish:	Posiciones de barbilla
DefaultVector:	[-1 -1]
IdentityVector:	n/a

(Read only property)

4.85.9   AttributeinputDisparityImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

(Read only property)

4.85.10   AttributeinputFocusRect as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputDisparityImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Disparity Image
DisplayName German:	Abweichungsbild
DisplayName French:	Image de disparit√©
DisplayName Italian:	Immagine di disparit√†
DisplayName Spanish:	Imagen de disparidad
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

Name:	inputFocusRect
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Focus Rectangle
DisplayName German:	Fokusrechteck
DisplayName French:	Rectangle de mise au point
DisplayName Italian:	Rettangolo di messa a fuoco
DisplayName Spanish:	Rect√°ngulo focal
DefaultVector:	n/a
IdentityVector:	[-8.98847e+307 -8.98847e+307 1.79769e+308 1.79769e+308]

(Read only property)

4.85.11   AttributeinputGainMap as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

(Read only property)

4.85.12   AttributeinputGlassesImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Name:	inputGainMap
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Gain Map
DisplayName German:	St√§rkeverteilung
DisplayName French:	Carte des gains
DisplayName Italian:	Mappa guadagno
DisplayName Spanish:	Mapa de ganancia
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

Name:	inputGlassesImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Glasses Image
DisplayName German:	Bild einer Brille
DisplayName French:	Image de lunettes
DisplayName Italian:	Immagine degli occhiali
DisplayName Spanish:	Imagen de las gafas
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.85.13   AttributeinputHairImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

(Read only property)

4.85.14   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputHairImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Hair Image
DisplayName German:	Haareffekt
DisplayName French:	Image de cheveu
DisplayName Italian:	Immagine capelli
DisplayName Spanish:	Imagen del cabello
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.85.15   AttributeinputLeftEyePositions as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

(Read only property)

4.85.16   AttributeinputLumaNoiseScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputLeftEyePositions
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Left Eye Positions
DisplayName German:	Positionen der linken Augen
DisplayName French:	Positions de l‚Äôil gauche
DisplayName Italian:	Posizioni occhio sinistro
DisplayName Spanish:	Posiciones de ojo izquierdo
DefaultVector:	[-1 -1]
IdentityVector:	n/a

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

Name:	inputLumaNoiseScale
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Luma Noise Scale
DisplayName German:	Luma-Rauschen-Skalierung
DisplayName French:	√âchelle de bruit de luminance
DisplayName Italian:	Scala rumore di luminanza
DisplayName Spanish:	Escala de ruido de luminancia
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	0.1
MinNumber:	0
SliderMaxNumber:	0.1
SliderMinNumber:	0

(Read only property)

4.85.17 AttributeinputMatteImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputMatteImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Matte Image
DisplayName German:	Bild mit Maske
DisplayName French:	Image de cache
DisplayName Italian:	Immagine opaca
DisplayName Spanish:	Imagen mate
DefaultNumber:	0
IdentityNumber:	0

4.85.18   AttributeinputNosePositions as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

Name:	inputNosePositions
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Nose Positions
DisplayName German:	Nasenpositionen
DisplayName French:	Positions du nez
DisplayName Italian:	Posizioni naso
DisplayName Spanish:	Posiciones de nariz
DefaultVector:	[-1 -1]
IdentityVector:	n/a

(Read only property)

4.85.19   AttributeinputRightEyePositions as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRightEyePositions
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Right Eye Positions
DisplayName German:	Positionen der rechten Augen
DisplayName French:	Positions de l‚Äôil droit
DisplayName Italian:	Posizioni occhio destro
DisplayName Spanish:	Posiciones de ojo derecho
DefaultVector:	[-1 -1]
IdentityVector:	n/a

4.85.20 AttributeinputScaleFactor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

Name:	inputScaleFactor
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Scale Factor
DisplayName German:	Skalierungsfaktor
DisplayName French:	Facteur d‚Äô√©chelle
DisplayName Italian:	Fattore di scala
DisplayName Spanish:	Factor de escala
DefaultNumber:	1
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.85.21 AttributeinputShape as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth Blur Effect attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputShape
Class:	String
DisplayName:	Shape
DefaultNumber:	0
IdentityNumber:	0

4.85.22   inputAperture as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Aperture
Notes:

Name:	inputAperture
Class:	double (NSNumber)
DisplayName English:	Aperture
DisplayName German:	Aperture
DisplayName French:	Aperture
DisplayName Italian:	Aperture
DisplayName Spanish:	Aperture
Type:	CIAttributeTypeScalar

See AttributeinputAperture for more details.
(Read and Write property)

4.85.23   inputAuxDataMetadata as CGImageMetadataMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Aux Data Metadata
Notes:

Name:	inputAuxDataMetadata
Class:	CGImageMetadataMBS (CGImageMetadataRef)
DisplayName English:	Aux Data Metadata
DisplayName German:	Hilfsdaten –Metadaten
DisplayName French:	M√©tadonn√©es des donn√©es auxiliaires
DisplayName Italian:	Metadati dati canale
DisplayName Spanish:	Metadatos auxiliares

See AttributeinputAuxDataMetadata for more details.
(Read and Write property)

4.85.24 inputCalibrationData as Variant

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Calibration Data
Notes:

Name:	inputCalibrationData
Class:	Variant (AVCameraCalibrationData)
DisplayName English:	Calibration Data
DisplayName German:	Kalibrierungsdaten
DisplayName French:	Donn√©es d,Äô√©talonnage
DisplayName Italian:	Dati di calibrazione
DisplayName Spanish:	Datos de calibraci√n

See AttributeinputCalibrationData for more details.
(Read and Write property)

4.85.25 inputChinPositions as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Chin Positions
Notes:

Name:	inputChinPositions
Class:	CIVectorMBS (CIVector)
DisplayName English:	Chin Positions
DisplayName German:	Kinnpositionen
DisplayName French:	Positions du menton
DisplayName Italian:	Posizioni mento
DisplayName Spanish:	Posiciones de barbilla
Type:	CIAttributeTypePosition

See AttributeinputChinPositions for more details.
(Read and Write property)

4.85.26 inputDisparityImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Disparity Image
Notes:

Name:	inputDisparityImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Disparity Image
DisplayName German:	Abweichungsbild
DisplayName French:	Image de disparit√©
DisplayName Italian:	Immagine di disparit√†
DisplayName Spanish:	Imagen de disparidad
Type:	CIAttributeTypeImage

See AttributeinputDisparityImage for more details.
(Read and Write property)

4.85.27 inputFocusRect as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Focus Rectangle
Notes:

Name:	inputFocusRect
Class:	CIVectorMBS (CIVector)
DisplayName English:	Focus Rectangle
DisplayName German:	Fokusrechteck
DisplayName French:	Rectangle de mise au point
DisplayName Italian:	Rettangolo di messa a fuoco
DisplayName Spanish:	Rect√°ngulo focal
Type:	CIAttributeTypeRectangle

See AttributeinputFocusRect for more details.
(Read and Write property)

4.85.28 inputGainMap as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Gain Map
Notes:

See AttributeinputGainMap for more details.
(Read and Write property)

Name:	inputGainMap
Class:	CIImageMBS (CIImage)
DisplayName English:	Gain Map
DisplayName German:	St√§rkeverteilung
DisplayName French:	Carte des gains
DisplayName Italian:	Mappa guadagno
DisplayName Spanish:	Mapa de ganancia
Type:	CIAttributeTypeImage

4.85.29   inputGlassesImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Glasses Image
Notes:

Name:	inputGlassesImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Glasses Image
DisplayName German:	Bild einer Brille
DisplayName French:	Image de lunettes
DisplayName Italian:	Immagine degli occhiali
DisplayName Spanish:	Imagen de las gafas
Type:	CIAttributeTypeImage

See AttributeinputGlassesImage for more details.
(Read and Write property)

4.85.30   inputHairImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Hair Image
Notes:

Name:	inputHairImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Hair Image
DisplayName German:	Haareffekt
DisplayName French:	Image de cheveu
DisplayName Italian:	Immagine capelli
DisplayName Spanish:	Imagen del cabello
Type:	CIAttributeTypeImage

See AttributeinputHairImage for more details.
(Read and Write property)

4.85.31   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.85.32   inputLeftEyePositions as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Left Eye Positions
Notes:

Name:	inputLeftEyePositions
Class:	CIVectorMBS (CIVector)
DisplayName English:	Left Eye Positions
DisplayName German:	Positionen der linken Augen
DisplayName French:	Positions de l‚Äôil gauche
DisplayName Italian:	Posizioni occhio sinistro
DisplayName Spanish:	Posiciones de ojo izquierdo
Type:	CIAttributeTypePosition

See AttributeinputLeftEyePositions for more details.
(Read and Write property)

4.85.33 inputLumaNoiseScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Luma Noise Scale
Notes:

Name:	inputLumaNoiseScale
Class:	double (NSNumber)
DisplayName English:	Luma Noise Scale
DisplayName German:	Luma-Rauschen-Skalierung
DisplayName French:	√âchelle de bruit de luminance
DisplayName Italian:	Scala rumore di luminanza
DisplayName Spanish:	Escala de ruido de luminancia
Type:	CIAttributeTypeScalar

See AttributeinputLumaNoiseScale for more details.
(Read and Write property)

4.85.34 inputMatteImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Matte Image
Notes:

Name:	inputMatteImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Matte Image
DisplayName German:	Bild mit Maske
DisplayName French:	Image de cache
DisplayName Italian:	Immagine opaca
DisplayName Spanish:	Imagen mate
Type:	CIAttributeTypeImage

See AttributeinputMatteImage for more details.
(Read and Write property)

4.85.35 inputNosePositions as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Nose Positions
Notes:

Name:	inputNosePositions
Class:	CIVectorMBS (CIVector)
DisplayName English:	Nose Positions
DisplayName German:	Nasenpositionen
DisplayName French:	Positions du nez
DisplayName Italian:	Posizioni naso
DisplayName Spanish:	Posiciones de nariz
Type:	CIAttributeTypePosition

See AttributeinputNosePositions for more details.
(Read and Write property)

4.85.36   inputRightEyePositions as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Right Eye Positions
Notes:

Name:	inputRightEyePositions
Class:	CIVectorMBS (CIVector)
DisplayName English:	Right Eye Positions
DisplayName German:	Positionen der rechten Augen
DisplayName French:	Positions de l‚Äôil droit
DisplayName Italian:	Posizioni occhio destro
DisplayName Spanish:	Posiciones de ojo derecho
Type:	CIAttributeTypePosition

See AttributeinputRightEyePositions for more details.
(Read and Write property)

4.85.37   inputScaleFactor as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale Factor
Notes:

See AttributeinputScaleFactor for more details.
(Read and Write property)

Name:	inputScaleFactor
Class:	double (NSNumber)
DisplayName English:	Scale Factor
DisplayName German:	Skalierungsfaktor
DisplayName French:	Facteur d‚Äô√©chelle
DisplayName Italian:	Fattore di scala
DisplayName Spanish:	Factor de escala
Type:	CIAttributeTypeScalar

4.85.38   inputShape as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Shape
Notes:

Name:	inputShape
Class:	String (NSString)
DisplayName English:	Shape
DisplayName German:	Shape
DisplayName French:	Shape
DisplayName Italian:	Shape
DisplayName Spanish:	Shape

See AttributeinputShape for more details.
(Read and Write property)

4.86   class CIFilterDepthOfFieldMBS

4.86.1   class CIFilterDepthOfFieldMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Depth of Field filter.
Notes: Details for this filter:

FilterName:	CIDepthOfField
DisplayName English:	Depth of Field
DisplayName German:	Sch√§rfentiefe
DisplayName French:	Profondeur de champ
DisplayName Italian:	Profondit√† di campo
DisplayName Spanish:	Profundidad de campo

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputPoint0: Point 0

- inputPoint1: Point 1

- inputSaturation: Saturation

- inputUnsharpMaskRadius: Unsharp Mask Radius

- inputUnsharpMaskIntensity: Unsharp Mask Intensity

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- [MBS Real Studio Plugins, version 13.1pr5](#)

4.86.2 Methods

4.86.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.86.4 Properties

4.86.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth of Field attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.86.6 AttributeinputPoint0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth of Field attribute.
Notes: This attribute should have this content:

Name:	inputPoint0
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Point 0
DisplayName German:	Punkt 0
DisplayName French:	Point¬†0
DisplayName Italian:	Punto 0
DisplayName Spanish:	Punto 0
DefaultVector:	[0 300]
IdentityVector:	n/a

(Read only property)

4.86.7   AttributeinputPoint1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth of Field attribute.
Notes: This attribute should have this content:

Name:	inputPoint1
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Point 1
DisplayName German:	Punkt 1
DisplayName French:	Point 1
DisplayName Italian:	Punto 1
DisplayName Spanish:	Punto 1
DefaultVector:	[300 300]
IdentityVector:	n/a

(Read only property)

4.86.8   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth of Field attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	6
IdentityNumber:	0
SliderMaxNumber:	30
SliderMinNumber:	0

(Read only property)

4.86.9 AttributeinputSaturation as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth of Field attribute.
Notes: This attribute should have this content:

Name:	inputSaturation
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Saturation
DisplayName German:	S√§ttigung
DisplayName French:	Saturation
DisplayName Italian:	Saturazione
DisplayName Spanish:	Saturaci√n
DefaultNumber:	1.5
IdentityNumber:	0
SliderMaxNumber:	10
SliderMinNumber:	0

(Read only property)

4.86.10   AttributeinputUnsharpMaskIntensity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth of Field attribute.
Notes: This attribute should have this content:

Name:	inputUnsharpMaskIntensity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Unsharp Mask Intensity
DisplayName German:	Intensit√§t von ‚ÄûUnscharf maskieren‚Äú
DisplayName French:	Intensit√© du masque flou
DisplayName Italian:	Intensit√† maschera di contrasto
DisplayName Spanish:	Intensidad de la m√°scara de desenfoque
DefaultNumber:	0.5
IdentityNumber:	0
SliderMaxNumber:	10
SliderMinNumber:	0

(Read only property)

4.86.11   AttributeinputUnsharpMaskRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth of Field attribute.
Notes: This attribute should have this content:

Name:	inputUnsharpMaskRadius
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Unsharp Mask Radius
DisplayName German:	Radius von ‚ÄûUnscharf maskieren‚Äú
DisplayName French:	Rayon du masque flou
DisplayName Italian:	Raggio maschera di contrasto
DisplayName Spanish:	Radio de la m√°scara de desenfoque
DefaultNumber:	2.5
IdentityNumber:	0
SliderMaxNumber:	10
SliderMinNumber:	0

(Read only property)

4.86.12 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.86.13 inputPoint0 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Point 0
Notes:

Name:	inputPoint0
Class:	CIVectorMBS (CIVector)
DisplayName English:	Point 0
DisplayName German:	Punkt 0
DisplayName French:	Point¬†0
DisplayName Italian:	Punto 0
DisplayName Spanish:	Punto 0
Type:	CIAttributeTypePosition

See AttributeinputPoint0 for more details.
(Read and Write property)

4.86.14   inputPoint1 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Point 1
Notes:

Name:	inputPoint1
Class:	CIVectorMBS (CIVector)
DisplayName English:	Point 1
DisplayName German:	Punkt 1
DisplayName French:	Point 1
DisplayName Italian:	Punto 1
DisplayName Spanish:	Punto 1
Type:	CIAttributeTypePosition

See AttributeinputPoint1 for more details.
(Read and Write property)

4.86.15   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeScalar

See AttributeinputRadius for more details.
(Read and Write property)

4.86.16   inputSaturation as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Saturation
Notes:

Name:	inputSaturation
Class:	double (NSNumber)
DisplayName English:	Saturation
DisplayName German:	S√§ttigung
DisplayName French:	Saturation
DisplayName Italian:	Saturazione
DisplayName Spanish:	Saturaci√n
Type:	CIAttributeTypeScalar

See AttributeinputSaturation for more details.
(Read and Write property)

4.86.17   inputUnsharpMaskIntensity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Unsharp Mask Intensity
Notes:

Name:	inputUnsharpMaskIntensity
Class:	double (NSNumber)
DisplayName English:	Unsharp Mask Intensity
DisplayName German:	Intensit√§t von ‚ÄûUnscharf maskieren‚Äú
DisplayName French:	Intensit√© du masque flou
DisplayName Italian:	Intensit√† maschera di contrasto
DisplayName Spanish:	Intensidad de la m√°scara de desenfoque
Type:	CIAttributeTypeScalar

See AttributeinputUnsharpMaskIntensity for more details.
(Read and Write property)

4.86.18   inputUnsharpMaskRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Unsharp Mask Radius
Notes:

See AttributeinputUnsharpMaskRadius for more details.
(Read and Write property)

Name:	inputUnsharpMaskRadius
Class:	double (NSNumber)
DisplayName English:	Unsharp Mask Radius
DisplayName German:	Radius von ‚ÄûUnscharf maskieren‚Äú
DisplayName French:	Rayon du masque flou
DisplayName Italian:	Raggio maschera di contrasto
DisplayName Spanish:	Radio de la m√°scara de desenfoque
Type:	CIAttributeTypeScalar

4.87 class CIFilterDepthToDisparityMBS

4.87.1 class CIFilterDepthToDisparityMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Depth To Disparity filter.
Notes: Details for this filter:

FilterName:	CIDepthToDisparity
DisplayName English:	Depth To Disparity
DisplayName German:	Tiefe zu Abweichung
DisplayName French:	Profondeur en disparit√©
DisplayName Italian:	Da profondit√† a disparit√†
DisplayName Spanish:	De profundidad a disparidad

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.87.2 Methods

4.87.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.87.4   Properties

4.87.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Depth To Disparity attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.87.6   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.88   class CIFilterDifferenceBlendModeMBS

4.88.1   class CIFilterDifferenceBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Difference Blend Mode filter.
Notes: Details for this filter:

FilterName:	CIDifferenceBlendMode
DisplayName English:	Difference Blend Mode
DisplayName German:	Mischmethode ‚ÄûDifferenz‚Äú
DisplayName French:	Mode de fusion Diff√©rence
DisplayName Italian:	Modalit√† sfumatura differenza
DisplayName Spanish:	Diferenciar modo de mezcla

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.88.2 Methods

4.88.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.88.4 Properties

4.88.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Difference Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.88.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Difference Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.88.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.88.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.89   class CIFilterDiscBlurMBS

4.89.1   class CIFilterDiscBlurMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Disc Blur filter.
Notes: Details for this filter:

FilterName:	CIDiscBlur
DisplayName English:	Disc Blur
DisplayName German:	Kreisf√rmige Unsch√§rfe
DisplayName French:	Flou (Disc Blur)
DisplayName Italian:	Effetto disco
DisplayName Spanish:	Disco difuminado

Categories:

- CICategoryBlur: Blur

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.89.2 Methods

4.89.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.89.4 Properties

4.89.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Disc Blur attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.89.6 AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Disc Blur attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	8
IdentityNumber:	0
SliderMaxNumber:	100
SliderMinNumber:	0

4.89.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.89.8   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

4.90   class CIFilterDisintegrateWithMaskTransitionMBS

4.90.1   class CIFilterDisintegrateWithMaskTransitionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Disintegrate With Mask filter.
Notes: Details for this filter:

FilterName:	CIDisintegrateWithMaskTransition
DisplayName English:	Disintegrate With Mask
DisplayName German:	√úbergang mit Maske
DisplayName French:	D√©sint√©grer avec masque
DisplayName Italian:	Disintegra con maschera
DisplayName Spanish:	Desintegrar con m√°scara

Categories:

- CICategoryTransition: Transition

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTargetImage: Target Image

- inputMaskImage: Mask Image

- inputTime: Time

- inputShadowRadius: Shadow Radius

- inputShadowDensity: Shadow Density

- inputShadowOffset: Shadow Offset

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.90.2 Methods

4.90.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.90.4 Properties

4.90.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Disintegrate With Mask attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.90.6 AttributeinputMaskImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Disintegrate With Mask attribute.
Notes: This attribute should have this content:

Name:	inputMaskImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Mask Image
DisplayName German:	Maske
DisplayName French:	Image du masque
DisplayName Italian:	Immagine maschera
DisplayName Spanish:	Imagen de m√°scara
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.90.7   AttributeinputShadowDensity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Disintegrate With Mask attribute.
Notes: This attribute should have this content:

Name:	inputShadowDensity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Shadow Density
DisplayName German:	Schattendichte
DisplayName French:	Densit√© de l‚Äôombre
DisplayName Italian:	Densit√† ombra
DisplayName Spanish:	Densidad del sombreado
DefaultNumber:	0.65
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.90.8 AttributeinputShadowOffset as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Disintegrate With Mask attribute.
Notes: This attribute should have this content:

Name:	inputShadowOffset
Class:	CIVectorMBS
Type:	CIAttributeTypeOffset
DisplayName English:	Shadow Offset
DisplayName German:	Schattenabstand
DisplayName French:	D√©calage de l‚Äôombre
DisplayName Italian:	Offset ombra
DisplayName Spanish:	Proyecci√n del sombreado
DefaultVector:	[0 -10]
IdentityVector:	[0 0]

(Read only property)

4.90.9 AttributeinputShadowRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Disintegrate With Mask attribute.
Notes: This attribute should have this content:

Name:	inputShadowRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Shadow Radius
DisplayName German:	Schattenradius
DisplayName French:	Rayon de l‚Äôombre
DisplayName Italian:	Raggio dell'ombra
DisplayName Spanish:	Radio del sombreado
DefaultNumber:	8
IdentityNumber:	0
SliderMaxNumber:	50
SliderMinNumber:	0

(Read only property)

4.90.10   AttributeinputTargetImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Disintegrate With Mask attribute.
Notes: This attribute should have this content:

Name:	inputTargetImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.90.11   AttributeinputTime as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Disintegrate With Mask attribute.
Notes: This attribute should have this content:

Name:	inputTime
Class:	double
Type:	CIAttributeTypeTime
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.90.12   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.90.13   inputMaskImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Mask Image
Notes:

Name:	inputMaskImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Mask Image
DisplayName German:	Maske
DisplayName French:	Image du masque
DisplayName Italian:	Immagine maschera
DisplayName Spanish:	Imagen de m√°scara
Type:	CIAttributeTypeImage

See AttributeinputMaskImage for more details.
(Read and Write property)

4.90.14 inputShadowDensity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Shadow Density
Notes:

Name:	inputShadowDensity
Class:	double (NSNumber)
DisplayName English:	Shadow Density
DisplayName German:	Schattendichte
DisplayName French:	Densit√© de l‚Äôombre
DisplayName Italian:	Densit√† ombra
DisplayName Spanish:	Densidad del sombreado
Type:	CIAttributeTypeScalar

See AttributeinputShadowDensity for more details.
(Read and Write property)

4.90.15 inputShadowOffset as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Shadow Offset
Notes:

Name:	inputShadowOffset
Class:	CIVectorMBS (CIVector)
DisplayName English:	Shadow Offset
DisplayName German:	Schattenabstand
DisplayName French:	D√©calage de l‚Äôombre
DisplayName Italian:	Offset ombra
DisplayName Spanish:	Proyecci√n del sombreado
Type:	CIAttributeTypeOffset

See AttributeinputShadowOffset for more details.
(Read and Write property)

4.90.16 inputShadowRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Shadow Radius
Notes:

Name:	inputShadowRadius
Class:	double (NSNumber)
DisplayName English:	Shadow Radius
DisplayName German:	Schattenradius
DisplayName French:	Rayon de l‚Äôombre
DisplayName Italian:	Raggio dell'ombra
DisplayName Spanish:	Radio del sombreado
Type:	CIAttributeTypeDistance

See AttributeinputShadowRadius for more details.
(Read and Write property)

4.90.17 inputTargetImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Target Image
Notes:

Name:	inputTargetImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
Type:	CIAttributeTypeImage

See AttributeinputTargetImage for more details.
(Read and Write property)

4.90.18 inputTime as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Time
Notes:

See AttributeinputTime for more details.
(Read and Write property)

Name:	inputTime
Class:	double (NSNumber)
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
Type:	CIAttributeTypeTime

4.91   class CIFilterDisparityToDepthMBS

4.91.1   class CIFilterDisparityToDepthMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Disparity To Depth filter.
Notes: Details for this filter:

FilterName:	CIDisparityToDepth
DisplayName English:	Disparity To Depth
DisplayName German:	Abweichung zu Tiefe
DisplayName French:	Disparit√© en profondeur
DisplayName Italian:	Da disparit√† a profondit√†
DisplayName Spanish:	De disparidad a profundidad

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.91.2   Methods

4.91.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.91.4   Properties

4.91.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Disparity To Depth attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.91.6   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.92   class CIFilterDisplacementDistortionMBS

4.92.1   class CIFilterDisplacementDistortionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Displacement Distortion filter.
Notes: Details for this filter:

FilterName:	CIDisplacementDistortion
DisplayName English:	Displacement Distortion
DisplayName German:	Verzerrung ‚ÄûVerdr√§ngung‚Äú
DisplayName French:	D√©formation D√©placement
DisplayName Italian:	Distorsione spostamento
DisplayName Spanish:	Distorsi√n de desplazamiento

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputDisplacementImage: Displacement Image

- inputScale: Scale

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.92.2 Methods

4.92.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.92.4 Properties

4.92.5 AttributeinputDisplacementImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Displacement Distortion attribute.
Notes: This attribute should have this content:

Name:	inputDisplacementImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Displacement Image
DisplayName German:	Bildverschiebung
DisplayName French:	Image du d√©placement
DisplayName Italian:	Immagine spostamento
DisplayName Spanish:	Imagen de desplazamiento
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.92.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Displacement Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.92.7   AttributeinputScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Displacement Distortion attribute.
Notes: This attribute should have this content:

Name:	inputScale
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
DefaultNumber:	50
IdentityNumber:	0
SliderMaxNumber:	200
SliderMinNumber:	0

(Read only property)

4.92.8   inputDisplacementImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Displacement Image
Notes:

See AttributeinputDisplacementImage for more details.
(Read and Write property)

Name:	inputDisplacementImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Displacement Image
DisplayName German:	Bildverschiebung
DisplayName French:	Image du d√©placement
DisplayName Italian:	Immagine spostamento
DisplayName Spanish:	Imagen de desplazamiento
Type:	CIAttributeTypeImage

4.92.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.92.10   inputScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale
Notes:

Name:	inputScale
Class:	double (NSNumber)
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
Type:	CIAttributeTypeDistance

See AttributeinputScale for more details.
(Read and Write property)

4.93 class CIFilterDissolveTransitionMBS

4.93.1 class CIFilterDissolveTransitionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Dissolve filter.
Notes: Details for this filter:

FilterName:	CIDissolveTransition
DisplayName English:	Dissolve
DisplayName German:	√úberblenden
DisplayName French:	Dissoudre
DisplayName Italian:	Dissolvenza
DisplayName Spanish:	Disoluci√n

Categories:

- CICategoryTransition: Transition

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTargetImage: Target Image

- inputTime: Time

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.93.2   Methods

4.93.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.93.4   Properties

4.93.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Dissolve attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.93.6   AttributeinputTargetImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Dissolve attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputTargetImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
DefaultNumber:	0
IdentityNumber:	0

4.93.7 AttributeinputTime as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Dissolve attribute.
Notes: This attribute should have this content:

Name:	inputTime
Class:	double
Type:	CIAttributeTypeTime
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.93.8 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

(Read and Write property)

4.93.9   inputTargetImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Target Image
Notes:

Name:	inputTargetImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
Type:	CIAttributeTypeImage

See AttributeinputTargetImage for more details.
(Read and Write property)

4.93.10   inputTime as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Time
Notes:

See AttributeinputTime for more details.
(Read and Write property)

Name:	inputTime
Class:	double (NSNumber)
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
Type:	CIAttributeTypeTime

4.94   class CIFilterDitherMBS

4.94.1   class CIFilterDitherMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Dither filter.
Notes: Details for this filter:

FilterName:	CIDither
DisplayName English:	Dither
DisplayName German:	Dither
DisplayName French:	Tramage
DisplayName Italian:	Dithering
DisplayName Spanish:	Tramar

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputIntensity: Intensity

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.94.2 Methods

4.94.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.94.4 Properties

4.94.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Dither attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.94.6 AttributeinputIntensity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Dither attribute.
Notes: This attribute should have this content:

(Read only property)

Name: inputIntensity
 Class: double
 Type: CIAttributeTypeScalar
 DisplayName English: Intensity
 DisplayName German: Intensit√§t
 DisplayName French: Intensit√©
 DisplayName Italian: Intensit√†
 DisplayName Spanish: Intensidad
 DefaultNumber: 0.1
 IdentityNumber: 0
 MaxNumber: 5
 MinNumber: 0
 SliderMaxNumber: 1
 SliderMinNumber: 0

4.94.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name: inputImage
 Class: CIImageMBS (CIImage)
 DisplayName English: Image
 DisplayName German: Bild
 DisplayName French: Image
 DisplayName Italian: Immagine
 DisplayName Spanish: Imagen
 Type: CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.94.8   inputIntensity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Intensity
Notes:

See AttributeinputIntensity for more details.
(Read and Write property)

Name:	inputIntensity
Class:	double (NSNumber)
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
Type:	CIAttributeTypeScalar

4.95 class CIFilterDivideBlendModeMBS

4.95.1 class CIFilterDivideBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Divide Blend Mode filter.
Notes: Details for this filter:

FilterName:	CIDivideBlendMode
DisplayName English:	Divide Blend Mode
DisplayName German:	Mischmethode ‚ÄûTeilen‚Äú
DisplayName French:	Mode de fusion Diviser
DisplayName Italian:	Modalit√† sfumatura dissolvenza
DisplayName Spanish:	Dividir modo de mezcla

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.95.2 Methods

4.95.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.95.4 Properties

4.95.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Divide Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.95.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Divide Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.95.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.95.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.96   class CIFilterDocumentEnhancerMBS

4.96.1   class CIFilterDocumentEnhancerMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Document Enhancer filter.
Notes: Details for this filter:

FilterName:	CIDocumentEnhancer
DisplayName English:	Document Enhancer
DisplayName German:	Dokumentverbesserung
DisplayName French:	Am√©lioration du document
DisplayName Italian:	Migliora documento
DisplayName Spanish:	Mejorar documentos

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputAmount: Amount

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

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4.96.2 Methods

4.96.3 Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.96.4 Properties

4.96.5 AttributeinputAmount as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Document Enhancer attribute.
Notes: This attribute should have this content:

Name:	inputAmount
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Amount
DisplayName German:	St√§rke
DisplayName French:	Montant
DisplayName Italian:	Quantit√†
DisplayName Spanish:	Cantidad
DefaultNumber:	1
IdentityNumber:	0
MaxNumber:	10
MinNumber:	0
SliderMaxNumber:	2
SliderMinNumber:	0

(Read only property)

4.96.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Document Enhancer attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.96.7   inputAmount as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Amount
Notes:

Name:	inputAmount
Class:	double (NSNumber)
DisplayName English:	Amount
DisplayName German:	St√§rke
DisplayName French:	Montant
DisplayName Italian:	Quantit√†
DisplayName Spanish:	Cantidad
Type:	CIAttributeTypeScalar

See AttributeinputAmount for more details.
(Read and Write property)

4.96.8   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.97 class CIFilterDotScreenMBS

4.97.1 class CIFilterDotScreenMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Dot Screen filter.
Notes: Details for this filter:

FilterName:	CIDotScreen
DisplayName English:	Dot Screen
DisplayName German:	Punktf√rmiges Halbtonraster
DisplayName French:	√âcran en pointill√©
DisplayName Italian:	Schermo a punti
DisplayName Spanish:	Pantalla punteada

Categories:

- CICategoryHalftoneEffect: Halftone Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputCenter: Center

- inputAngle: Angle

- inputWidth: Width

- inputSharpness: Sharpness

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.97.2 Methods

4.97.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.97.4 Properties

4.97.5 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Dot Screen attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.97.6 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Dot Screen attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.97.7 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Dot Screen attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.97.8 AttributeinputSharpness as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Dot Screen attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputSharpness
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
DefaultNumber:	0.7
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.97.9   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Dot Screen attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	6
IdentityNumber:	0
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	50
SliderMinNumber:	2

(Read only property)

4.97.10   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.97.11 inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.97.12 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.97.13   inputSharpness as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Sharpness
Notes:

Name:	inputSharpness
Class:	double (NSNumber)
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
Type:	CIAttributeTypeScalar

See AttributeinputSharpness for more details.
(Read and Write property)

4.97.14   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.98 class CIFilterDrosteMBS

4.98.1 class CIFilterDrosteMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Droste filter.
Notes: Details for this filter:

FilterName:	CIDroste
DisplayName English:	Droste
DisplayName German:	Droste
DisplayName French:	Droste
DisplayName Italian:	Droste
DisplayName Spanish:	Droste

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputInsetPoint0: Inset Point 0

- inputInsetPoint1: Inset Point 1

- inputStrands: Strands

- inputPeriodicity: Periodicity

- inputRotation: Rotation

- inputZoom: Zoom

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- [MBS Real Studio Plugins, version 13.1pr5](#)

4.98.2   Methods

4.98.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.98.4   Properties

4.98.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Droste attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.98.6   AttributeinputInsetPoint0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Droste attribute.
Notes: This attribute should have this content:

Name:	inputInsetPoint0
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Inset Point 0
DisplayName German:	Abstandspunkt 0
DisplayName French:	Point d‚Äôinsertion¬†0
DisplayName Italian:	Punto di inserimento 0
DisplayName Spanish:	Punto de inserci√n 0
DefaultVector:	[200 200]
IdentityVector:	n/a

(Read only property)

4.98.7 AttributeinputInsetPoint1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Droste attribute.
Notes: This attribute should have this content:

Name:	inputInsetPoint1
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Inset Point 1
DisplayName German:	Abstandspunkt 1
DisplayName French:	Point d‚Äôinsertion¬†1
DisplayName Italian:	Punto di inserimento 1
DisplayName Spanish:	Punto de inserci√n 1
DefaultVector:	[400 400]
IdentityVector:	n/a

(Read only property)

4.98.8 AttributeinputPeriodicity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Droste attribute.
Notes: This attribute should have this content:

Name:	inputPeriodicity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Periodicity
DefaultNumber:	1
IdentityNumber:	0
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	5
SliderMinNumber:	1

(Read only property)

4.98.9   AttributeinputRotation as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Droste attribute.
Notes: This attribute should have this content:

Name:	inputRotation
Class:	double
Type:	CIAttributeTypeAngle
DisplayName:	Rotation
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	6.283185
SliderMinNumber:	0

(Read only property)

4.98.10   AttributeinputStrands as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Droste attribute.
Notes: This attribute should have this content:

Name:	inputStrands
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Strands
DefaultNumber:	1
IdentityNumber:	0
MaxNumber:	10
MinNumber:	-10
SliderMaxNumber:	2
SliderMinNumber:	-2

(Read only property)

4.98.11   AttributeinputZoom as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Droste attribute.
Notes: This attribute should have this content:

Name:	inputZoom
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Zoom
DefaultNumber:	1
IdentityNumber:	0
MaxNumber:	0
MinNumber:	0.01
SliderMaxNumber:	5
SliderMinNumber:	0.01

(Read only property)

4.98.12   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.98.13   inputInsetPoint0 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Inset Point 0
Notes:

Name:	inputInsetPoint0
Class:	CIVectorMBS (CIVector)
DisplayName English:	Inset Point 0
DisplayName German:	Abstandspunkt 0
DisplayName French:	Point d‚Äôinsertion¬†0
DisplayName Italian:	Punto di inserimento 0
DisplayName Spanish:	Punto de inserci√n 0
Type:	CIAttributeTypePosition

See AttributeinputInsetPoint0 for more details.
(Read and Write property)

4.98.14   inputInsetPoint1 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Inset Point 1
Notes:

See AttributeinputInsetPoint1 for more details.
(Read and Write property)

Name:	inputInsetPoint1
Class:	CIVectorMBS (CIVector)
DisplayName English:	Inset Point 1
DisplayName German:	Abstandspunkt 1
DisplayName French:	Point d‚Äôinsertion¬†1
DisplayName Italian:	Punto di inserimento 1
DisplayName Spanish:	Punto de inserci√n 1
Type:	CIAttributeTypePosition

4.98.15   inputPeriodicity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Periodicity
Notes:

Name:	inputPeriodicity
Class:	double (NSNumber)
DisplayName English:	Periodicity
DisplayName German:	Periodicity
DisplayName French:	Periodicity
DisplayName Italian:	Periodicity
DisplayName Spanish:	Periodicity
Type:	CIAttributeTypeScalar

See AttributeinputPeriodicity for more details.
(Read and Write property)

4.98.16   inputRotation as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Rotation
Notes:

Name:	inputRotation
Class:	double (NSNumber)
DisplayName English:	Rotation
DisplayName German:	Rotation
DisplayName French:	Rotation
DisplayName Italian:	Rotation
DisplayName Spanish:	Rotation
Type:	CIAttributeTypeAngle

See AttributeinputRotation for more details.
(Read and Write property)

4.98.17   inputStrands as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Strands
Notes:

Name:	inputStrands
Class:	double (NSNumber)
DisplayName English:	Strands
DisplayName German:	Strands
DisplayName French:	Strands
DisplayName Italian:	Strands
DisplayName Spanish:	Strands
Type:	CIAttributeTypeScalar

See AttributeinputStrands for more details.
(Read and Write property)

4.98.18   inputZoom as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Zoom
Notes:

Name:	inputZoom
Class:	double (NSNumber)
DisplayName English:	Zoom
DisplayName German:	Zoom
DisplayName French:	Zoom
DisplayName Italian:	Zoom
DisplayName Spanish:	Zoom
Type:	CIAttributeTypeScalar

See AttributeinputZoom for more details.
(Read and Write property)

4.99   class CIFilterEdgePreserveUpsampleFilterMBS

4.99.1   class CIFilterEdgePreserveUpsampleFilterMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Edge Preserve Upsample Filter filter.
Notes: Details for this filter:

FilterName:	CIEdgePreserveUpsampleFilter
DisplayName English:	Edge Preserve Upsample Filter
DisplayName German:	Kantenerhaltender Upsample-Filter
DisplayName French:	Filtre de sur√©chantillonnage pour la pr√©servation des contours
DisplayName Italian:	Filtro di ricampionamento per la conservazione dei bordi
DisplayName Spanish:	Filtro de interpolaci√n con preservaci√n de bordes

Categories:

- CICategoryGeometryAdjustment: Geometry Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputSmallImage: Small Image

- inputSpatialSigma: Spatial Sigma

- inputLumaSigma: Luma Sigma

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.99.2   Methods

4.99.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.99.4   Properties

4.99.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Edge Preserve Upsample Filter attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.99.6   AttributeinputLumaSigma as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Edge Preserve Upsample Filter attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputLumaSigma
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Luma Sigma
DisplayName German:	Luma-Sigma
DisplayName French:	Sigma de la luminance
DisplayName Italian:	Sigma luminanza
DisplayName Spanish:	Desviaci√n est√°ndar sigma de luminancia
DefaultNumber:	0.15
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0

4.99.7 AttributeinputSmallImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Edge Preserve Upsample Filter attribute.
Notes: This attribute should have this content:

Name:	inputSmallImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Small Image
DisplayName German:	Kleines Bild
DisplayName French:	Petite image
DisplayName Italian:	Immagine di dimensioni ridotte
DisplayName Spanish:	Imagen peque√±a
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.99.8 AttributeinputSpatialSigma as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Edge Preserve Upsample Filter attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputSpatialSigma
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Spatial Sigma
DisplayName German:	R√§umliches Sigma
DisplayName French:	Sigma spatial
DisplayName Italian:	Sigma spaziale
DisplayName Spanish:	Desviaci√n est√°ndar sigma espacial
DefaultNumber:	3
IdentityNumber:	0
MaxNumber:	5
MinNumber:	0

4.99.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.99.10   inputLumaSigma as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Luma Sigma
Notes:

See AttributeinputLumaSigma for more details.
(Read and Write property)

Name:	inputLumaSigma
Class:	double (NSNumber)
DisplayName English:	Luma Sigma
DisplayName German:	Luma-Sigma
DisplayName French:	Sigma de la luminance
DisplayName Italian:	Sigma luminanza
DisplayName Spanish:	Desviaci√n est√°ndar sigma de luminancia
Type:	CIAttributeTypeScalar

4.99.11   inputSmallImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Small Image
Notes:

Name:	inputSmallImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Small Image
DisplayName German:	Kleines Bild
DisplayName French:	Petite image
DisplayName Italian:	Immagine di dimensioni ridotte
DisplayName Spanish:	Imagen peque√±a
Type:	CIAttributeTypeImage

See AttributeinputSmallImage for more details.
(Read and Write property)

4.99.12   inputSpatialSigma as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Spatial Sigma
Notes:

Name:	inputSpatialSigma
Class:	double (NSNumber)
DisplayName English:	Spatial Sigma
DisplayName German:	R√§umliches Sigma
DisplayName French:	Sigma spatial
DisplayName Italian:	Sigma spaziale
DisplayName Spanish:	Desviaci√n est√°ndar sigma espacial
Type:	CIAttributeTypeScalar

See AttributeinputSpatialSigma for more details.

(Read and Write property)

4.100 class CIFilterEdgesMBS

4.100.1 class CIFilterEdgesMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Edges filter.
Notes: Details for this filter:

FilterName:	CIEdges
DisplayName English:	Edges
DisplayName German:	Kanten
DisplayName French:	Contours
DisplayName Italian:	Estremit√†
DisplayName Spanish:	Bordes

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputIntensity: Intensity

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.100.2   Methods

4.100.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.100.4   Properties

4.100.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Edges attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.100.6   AttributeinputIntensity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Edges attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputIntensity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
DefaultNumber:	1
IdentityNumber:	0
SliderMaxNumber:	10
SliderMinNumber:	0

4.100.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.100.8   inputIntensity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Intensity
Notes:

See AttributeinputIntensity for more details.
(Read and Write property)

Name:	inputIntensity
Class:	double (NSNumber)
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
Type:	CIAttributeTypeScalar

4.101 class CIFilterEdgeWorkMBS

4.101.1 class CIFilterEdgeWorkMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Edge Work filter.
Notes: Details for this filter:

FilterName:	CIEdgeWork
DisplayName English:	Edge Work
DisplayName German:	Kontur finden
DisplayName French:	Contourage
DisplayName Italian:	Lavoro sull'estremit√†
DisplayName Spanish:	Trabajo en bordes

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.101.2 Methods

4.101.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.101.4   Properties

4.101.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Edge Work attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.101.6   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Edge Work attribute.
Notes: This attribute should have this content:

(Read only property)

4.101.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	3
IdentityNumber:	0
SliderMaxNumber:	20
SliderMinNumber:	0

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.101.8   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.102 class CIFilterEightfoldReflectedTileMBS

4.102.1 class CIFilterEightfoldReflectedTileMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Eightfold Reflected Tile filter.
Notes: Details for this filter:

FilterName:	CIEightfoldReflectedTile
DisplayName English:	Eightfold Reflected Tile
DisplayName German:	8-fach reflektierte Kachel
DisplayName French:	Mosa√Øque r√©fl√©chie 8 fois
DisplayName Italian:	Mosaico riflesso in otto direzioni
DisplayName Spanish:	Mosaico reflejado ocho veces

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputAngle: Angle

- inputWidth: Width

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.102.2   Methods

4.102.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.102.4   Properties

4.102.5   AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Eightfold Reflected Tile attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.102.6   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Eightfold Reflected Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.102.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Eightfold Reflected Tile attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.102.8   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Eightfold Reflected Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	100
IdentityNumber:	100
SliderMaxNumber:	200
SliderMinNumber:	1

4.102.9   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.102.10   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

4.102.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.102.12   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.

(Read and Write property)

4.103 class CIFilterExclusionBlendModeMBS

4.103.1 class CIFilterExclusionBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Exclusion Blend Mode filter.
Notes: Details for this filter:

FilterName:	CIExclusionBlendMode
DisplayName English:	Exclusion Blend Mode
DisplayName German:	Mischmethode ‚ÄûAusschluss‚Äú
DisplayName French:	Mode de fusion Exclusion
DisplayName Italian:	Modalit√† sfumatura esclusione
DisplayName Spanish:	Modo de mezcla por exclusi√n

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.103.2 Methods

4.103.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.103.4 Properties

4.103.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Exclusion Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.103.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Exclusion Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.103.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.103.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.104 class CIFilterExposureAdjustMBS

4.104.1 class CIFilterExposureAdjustMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Exposure Adjust filter.
Notes: Details for this filter:

FilterName:	CIExposureAdjust
DisplayName English:	Exposure Adjust
DisplayName German:	Belichtung anpassen
DisplayName French:	Ajustement d‚Äôexposition
DisplayName Italian:	Regolazione esposizione
DisplayName Spanish:	Ajuste de exposici√n

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

- CICategoryXMPSerializable: CICategoryXMPSerializable

Input:

- inputImage: Image

- inputEV: EV

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.104.2   Methods

4.104.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.104.4   Properties

4.104.5   AttributeinputEV as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Exposure Adjust attribute.
Notes: This attribute should have this content:

Name:	inputEV
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	EV
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	10
SliderMinNumber:	-10

(Read only property)

4.104.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Exposure Adjust attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.104.7   inputEV as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute EV
Notes:

Name:	inputEV
Class:	double (NSNumber)
DisplayName English:	EV
DisplayName German:	EV
DisplayName French:	EV
DisplayName Italian:	EV
DisplayName Spanish:	EV
Type:	CIAttributeTypeScalar

See AttributeinputEV for more details.
(Read and Write property)

4.104.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.105 class CIFilterFalseColorMBS

4.105.1 class CIFilterFalseColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage False Color filter.
Notes: Details for this filter:

FilterName:	CIFalseColor
DisplayName English:	False Color
DisplayName German:	Falschfarbendarstellung
DisplayName French:	Fausse couleur
DisplayName Italian:	Colore falso
DisplayName Spanish:	Color falso

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputColor0: Color 1

- inputColor1: Color 2

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.105.2   Methods

4.105.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.105.4   Properties

4.105.5   AttributeinputColor0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the False Color attribute.
Notes: This attribute should have this content:

Name:	inputColor0
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color 1
DisplayName German:	Farbe 1
DisplayName French:	Couleur 1
DisplayName Italian:	Colore 1
DisplayName Spanish:	Color 1
DefaultColor:	Red = 0.3, Green = 0, Blue = 0, Alpha = 1
IdentityNumber:	0

(Read only property)

4.105.6   AttributeinputColor1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the False Color attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputColor1
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color 2
DisplayName German:	Farbe 2
DisplayName French:	Couleur 2
DisplayName Italian:	Colore 2
DisplayName Spanish:	Color 2
DefaultColor:	Red = 1, Green = 0.9, Blue = 0.8, Alpha = 1
IdentityNumber:	0

4.105.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the False Color attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.105.8   inputColor0 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color 1
Notes:

See AttributeinputColor0 for more details.
(Read and Write property)

Name: inputColor0
 Class: CIColorMBS (CIColor)
 DisplayName English: Color 1
 DisplayName German: Farbe 1
 DisplayName French: Couleur 1
 DisplayName Italian: Colore 1
 DisplayName Spanish: Color 1
 Type: CIAttributeTypeColor

4.105.9   inputColor1 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color 2
Notes:

Name: inputColor1
 Class: CIColorMBS (CIColor)
 DisplayName English: Color 2
 DisplayName German: Farbe 2
 DisplayName French: Couleur 2
 DisplayName Italian: Colore 2
 DisplayName Spanish: Color 2
 Type: CIAttributeTypeColor

See AttributeinputColor1 for more details.
(Read and Write property)

4.105.10   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name: inputImage
 Class: CIImageMBS (CIImage)
 DisplayName English: Image
 DisplayName German: Bild
 DisplayName French: Image
 DisplayName Italian: Immagine
 DisplayName Spanish: Imagen
 Type: CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.106   class CIFilterFlashTransitionMBS

4.106.1   class CIFilterFlashTransitionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Flash filter.
Notes: Details for this filter:

FilterName:	CIFlashTransition
DisplayName English:	Flash
DisplayName German:	Blinken
DisplayName French:	Flash
DisplayName Italian:	Flash
DisplayName Spanish:	Flash

Categories:

- CICategoryTransition: Transition

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTargetImage: Target Image

- inputCenter: Center

- inputExtent: Extent

- inputColor: Color

- inputTime: Time

- inputMaxStriationRadius: Maximum Striation Radius

- inputStriationStrength: Striation Strength

- inputStriationContrast: Striation Contrast

- inputFadeThreshold: Fade Threshold

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.106.2 Methods

4.106.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.106.4 Properties

4.106.5 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Flash attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.106.6   AttributeinputColor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Flash attribute.
Notes: This attribute should have this content:

Name:	inputColor
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
DefaultColor:	Red = 1, Green = 0.8, Blue = 0.6, Alpha = 1
IdentityNumber:	0

(Read only property)

4.106.7   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Flash attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	$\sqrt{}$âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 300 300]
IdentityVector:	n/a

(Read only property)

4.106.8 AttributeinputFadeThreshold as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Flash attribute.
Notes: This attribute should have this content:

Name:	inputFadeThreshold
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Fade Threshold
DisplayName German:	Schwellenwert f√°r √úberblenden
DisplayName French:	Seuil de d√©coloration
DisplayName Italian:	Soglia dissolvenza
DisplayName Spanish:	Umbral de desvanecimiento
DefaultNumber:	0.85
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.106.9 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Flash attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.106.10   AttributeinputMaxStriationRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Flash attribute.
Notes: This attribute should have this content:

Name:	inputMaxStriationRadius
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Maximum Striation Radius
DisplayName German:	Maximaler Radius f√ºr Riffelung
DisplayName French:	Rayon maximum des stries
DisplayName Italian:	Raggio di massima striatura
DisplayName Spanish:	Radio de estriaci√n m√°ximo
DefaultNumber:	2.58
IdentityNumber:	0
SliderMaxNumber:	10
SliderMinNumber:	0

(Read only property)

4.106.11   AttributeinputStriationContrast as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Flash attribute.
Notes: This attribute should have this content:

(Read only property)

4.106.12   AttributeinputStriationStrength as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Flash attribute.
Notes: This attribute should have this content:

Name:	inputStriationContrast
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Striation Contrast
DisplayName German:	Kontrast f√°r Riffelung
DisplayName French:	Contraste des stries
DisplayName Italian:	Contrasto striatura
DisplayName Spanish:	Contraste de la estriaci√n
DefaultNumber:	1.375
IdentityNumber:	0
SliderMaxNumber:	5
SliderMinNumber:	0

Name:	inputStriationStrength
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Striation Strength
DisplayName German:	St√§rke der Riffelung
DisplayName French:	Force des stries
DisplayName Italian:	Livello striatura
DisplayName Spanish:	Intensidad de la estriaci√n
DefaultNumber:	0.5
IdentityNumber:	0
SliderMaxNumber:	3
SliderMinNumber:	0

(Read only property)

4.106.13   AttributeinputTargetImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Flash attribute.
Notes: This attribute should have this content:

(Read only property)

4.106.14   AttributeinputTime as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputTargetImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the Flash attribute.
Notes: This attribute should have this content:

Name:	inputTime
Class:	double
Type:	CIAttributeTypeTime
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.106.15   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

4.106.16   inputColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color
Notes:

Name:	inputColor
Class:	CIColorMBS (CIColor)
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
Type:	CIAttributeTypeColor

See AttributeinputColor for more details.
(Read and Write property)

4.106.17   inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.106.18   inputFadeThreshold as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Fade Threshold
Notes:

Name:	inputFadeThreshold
Class:	double (NSNumber)
DisplayName English:	Fade Threshold
DisplayName German:	Schwellenwert f√°r √úberblenden
DisplayName French:	Seuil de d√©coloration
DisplayName Italian:	Soglia dissolvenza
DisplayName Spanish:	Umbral de desvanecimiento
Type:	CIAttributeTypeScalar

See AttributeinputFadeThreshold for more details.
(Read and Write property)

4.106.19   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.106.20 inputMaxStriationRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Maximum Striation Radius
Notes:

Name:	inputMaxStriationRadius
Class:	double (NSNumber)
DisplayName English:	Maximum Striation Radius
DisplayName German:	Maximaler Radius f√ºr Riffelung
DisplayName French:	Rayon maximum des stries
DisplayName Italian:	Raggio di massima striatura
DisplayName Spanish:	Radio de estriaci√n m√°ximo
Type:	CIAttributeTypeScalar

See AttributeinputMaxStriationRadius for more details.
(Read and Write property)

4.106.21 inputStriationContrast as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Striation Contrast
Notes:

Name:	inputStriationContrast
Class:	double (NSNumber)
DisplayName English:	Striation Contrast
DisplayName German:	Kontrast f√ºr Riffelung
DisplayName French:	Contraste des stries
DisplayName Italian:	Contrasto striatura
DisplayName Spanish:	Contraste de la estriaci√n
Type:	CIAttributeTypeScalar

See AttributeinputStriationContrast for more details.
(Read and Write property)

4.106.22 inputStriationStrength as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Striation Strength
Notes:

Name:	inputStriationStrength
Class:	double (NSNumber)
DisplayName English:	Striation Strength
DisplayName German:	St√§rke der Riffelung
DisplayName French:	Force des stries
DisplayName Italian:	Livello striatura
DisplayName Spanish:	Intensidad de la estriaci√n
Type:	CIAttributeTypeScalar

See AttributeinputStriationStrength for more details.
(Read and Write property)

4.106.23   inputTargetImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Target Image
Notes:

Name:	inputTargetImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
Type:	CIAttributeTypeImage

See AttributeinputTargetImage for more details.
(Read and Write property)

4.106.24   inputTime as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Time
Notes:

See AttributeinputTime for more details.
(Read and Write property)

Name:	inputTime
Class:	double (NSNumber)
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
Type:	CIAttributeTypeTime

4.107   class CIFilterFourfoldReflectedTileMBS

4.107.1   class CIFilterFourfoldReflectedTileMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Fourfold Reflected Tile filter.
Notes: Details for this filter:

FilterName:	CIFourfoldReflectedTile
DisplayName English:	Fourfold Reflected Tile
DisplayName German:	4-fach reflektierte Kachel
DisplayName French:	Mosa√Øque r√©fl√©chie 4 fois
DisplayName Italian:	Mosaico riflesso in quattro direzioni
DisplayName Spanish:	Mosaico reflejado cuatro veces

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputAngle: Angle

- inputWidth: Width

- inputAcuteAngle: Acute Angle

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.107.2 Methods

4.107.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.107.4 Properties

4.107.5 AttributeinputAcuteAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Fourfold Reflected Tile attribute.
Notes: This attribute should have this content:

Name:	inputAcuteAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Acute Angle
DisplayName German:	Spitzer Winkel
DisplayName French:	Angle aigu
DisplayName Italian:	Angolo acuto
DisplayName Spanish:	$\sqrt{}$Ángulo agudo
DefaultNumber:	1.570796
IdentityNumber:	1.570796
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.107.6 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Fourfold Reflected Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

4.107.7   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Fourfold Reflected Tile attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.107.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Fourfold Reflected Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.107.9 AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Fourfold Reflected Tile attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	100
IdentityNumber:	100
SliderMaxNumber:	200
SliderMinNumber:	1

(Read only property)

4.107.10 inputAcuteAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Acute Angle
Notes:

See AttributeinputAcuteAngle for more details.
(Read and Write property)

Name:	inputAcuteAngle
Class:	double (NSNumber)
DisplayName English:	Acute Angle
DisplayName German:	Spitzer Winkel
DisplayName French:	Angle aigu
DisplayName Italian:	Angolo acuto
DisplayName Spanish:	√Ångulo agudo
Type:	CIAttributeTypeAngle

4.107.11   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.107.12   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.107.13   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.107.14   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.108   class CIFilterFourfoldRotatedTileMBS

4.108.1   class CIFilterFourfoldRotatedTileMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Fourfold Rotated Tile filter.
Notes: Details for this filter:

FilterName:	CIFourfoldRotatedTile
DisplayName English:	Fourfold Rotated Tile
DisplayName German:	4-fach gedrehte Kachel
DisplayName French:	Mosa√Øque pivot√©e 4 fois
DisplayName Italian:	Mosaico ruotato in quattro direzioni
DisplayName Spanish:	Mosaico rotado cuatro veces

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputAngle: Angle

- inputWidth: Width

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.108.2 Methods

4.108.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.108.4 Properties

4.108.5 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Fourfold Rotated Tile attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.108.6 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Fourfold Rotated Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.108.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Fourfold Rotated Tile attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.108.8   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Fourfold Rotated Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	100
IdentityNumber:	100
SliderMaxNumber:	200
SliderMinNumber:	1

4.108.9   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.108.10   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

4.108.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.108.12   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.109   class CIFilterFourfoldTranslatedTileMBS

4.109.1   class CIFilterFourfoldTranslatedTileMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Fourfold Translated Tile filter.
Notes: Details for this filter:

FilterName:	CIFourfoldTranslatedTile
DisplayName English:	Fourfold Translated Tile
DisplayName German:	4-fach √⍴bersetzte Kachel
DisplayName French:	Mosa√Øque d√©plac√©e 4 fois
DisplayName Italian:	Mosaico traslato in quattro direzioni
DisplayName Spanish:	Mosaico desplazado cuatro veces

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputAngle: Angle

- inputWidth: Width

- inputAcuteAngle: Acute Angle

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.109.2 Methods

4.109.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.109.4 Properties

4.109.5 AttributeinputAcuteAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Fourfold Translated Tile attribute.
Notes: This attribute should have this content:

Name:	inputAcuteAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Acute Angle
DisplayName German:	Spitzer Winkel
DisplayName French:	Angle aigu
DisplayName Italian:	Angolo acuto
DisplayName Spanish:	√Ångulo agudo
DefaultNumber:	1.570796
IdentityNumber:	1.570796
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.109.6 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Fourfold Translated Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

4.109.7   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Fourfold Translated Tile attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.109.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Fourfold Translated Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.109.9   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Fourfold Translated Tile attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	100
IdentityNumber:	100
SliderMaxNumber:	200
SliderMinNumber:	1

(Read only property)

4.109.10   inputAcuteAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Acute Angle
Notes:

See AttributeinputAcuteAngle for more details.
(Read and Write property)

Name:	inputAcuteAngle
Class:	double (NSNumber)
DisplayName English:	Acute Angle
DisplayName German:	Spitzer Winkel
DisplayName French:	Angle aigu
DisplayName Italian:	Angolo acuto
DisplayName Spanish:	√Ångulo agudo
Type:	CIAttributeTypeAngle

4.109.11   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.109.12   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.109.13   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.109.14   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.110   class CIFilterGaborGradientsMBS

4.110.1   class CIFilterGaborGradientsMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Gabor Gradients filter.
Notes: Details for this filter:

FilterName:	CIGaborGradients
DisplayName English:	Gabor Gradients
DisplayName German:	Gabor-Verl√§ufe
DisplayName French:	D√©grad√©s Gabor
DisplayName Italian:	Gradienti di Gabor
DisplayName Spanish:	Gradientes de Gabor

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.110.2 Methods

4.110.3 Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.110.4 Properties

4.110.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Gabor Gradients attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.110.6 inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.111 class CIFilterGammaAdjustMBS

4.111.1 class CIFilterGammaAdjustMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Gamma Adjust filter.
Notes: Details for this filter:

FilterName:	CIGammaAdjust
DisplayName English:	Gamma Adjust
DisplayName German:	Gamma anpassen
DisplayName French:	Ajustement gamma
DisplayName Italian:	Regolazione gamma
DisplayName Spanish:	Ajuste de gama

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputPower: Power

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.111.2   Methods

4.111.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.111.4   Properties

4.111.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Gamma Adjust attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.111.6   AttributeinputPower as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Gamma Adjust attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputPower
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Power
DisplayName German:	St√§rke
DisplayName French:	Puissance
DisplayName Italian:	Energia
DisplayName Spanish:	Alimentaci√n
DefaultNumber:	1
IdentityNumber:	1
SliderMaxNumber:	4
SliderMinNumber:	0.25

4.111.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.111.8   inputPower as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Power
Notes:

See AttributeinputPower for more details.
(Read and Write property)

Name:	inputPower
Class:	double (NSNumber)
DisplayName English:	Power
DisplayName German:	St√§rke
DisplayName French:	Puissance
DisplayName Italian:	Energia
DisplayName Spanish:	Alimentaci√n
Type:	CIAttributeTypeScalar

4.112 class CIFilterGaussianBlurMBS

4.112.1 class CIFilterGaussianBlurMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Gaussian Blur filter.
Example:

dim CIFilter as new CIFilterGaussianBlurMBS
dim ROIpic as Picture = LogoMBS(500)
dim CGImage as CGImageMBS = CGCreateImageMBS(ROIpic)
dim ciimage as CIImageMBS = NewCIImagewithCGImageMBS(CGImage)

CIFilter.inputImage = CIImage
cifilter.inputRadius = 10 //the property which holds the blur radius

dim result as CIImageMBS = cifilter.outputImage

dim r as Picture = result.RenderPicture

window1.Backdrop = r

Notes: Details for this filter:

FilterName:	CIGaussianBlur
DisplayName English:	Gaussian Blur
DisplayName German:	Gau√ü‚Äôsche Unsch√§rfe
DisplayName French:	Flou gaussien
DisplayName Italian:	Sfumatura gaussiana
DisplayName Spanish:	Difuminado gaussiano

Categories:

- CICategoryBlur: Blur

- CICategoryStillImage: Still Image

- CICategoryVideo: Video

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputRadius: Radius

Output:

- outputImage

Warning: Due to the blur, the output image may be bigger, so you need to crop space on the border to get back to old size.
Subclass of the CIFilterMBS class.

4.112.2   Methods

4.112.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.112.4   Properties

4.112.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Gaussian Blur attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.112.6   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Gaussian Blur attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	10
IdentityNumber:	0
SliderMaxNumber:	100
SliderMinNumber:	0

(Read only property)

4.112.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.112.8   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeScalar

See AttributeinputRadius for more details.
(Read and Write property)

4.113 class CIFilterGaussianGradientMBS

4.113.1 class CIFilterGaussianGradientMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Gaussian Gradient filter.
Notes: Details for this filter:

FilterName:	CIGaussianGradient
DisplayName English:	Gaussian Gradient
DisplayName German:	Gau√ü‚Äôscher Verlauf
DisplayName French:	D√©grad√© gaussien
DisplayName Italian:	Gradiente gaussiano
DisplayName Spanish:	Degradado gaussiano

Categories:

- CICategoryGradient: Gradient

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputCenter: Center

- inputColor0: Color 1

- inputColor1: Color 2

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- Tip of day: Gradients with CoreImage Filter

4.113.2   Methods

4.113.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.113.4   Properties

4.113.5   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Gaussian Gradient attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.113.6   AttributeinputColor0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Gaussian Gradient attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputColor0
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color 1
DisplayName German:	Farbe 1
DisplayName French:	Couleur 1
DisplayName Italian:	Colore 1
DisplayName Spanish:	Color 1
DefaultColor:	Red = 1, Green = 1, Blue = 1, Alpha = 1
IdentityNumber:	0

4.113.7   AttributeinputColor1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Gaussian Gradient attribute.
Notes: This attribute should have this content:

Name:	inputColor1
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color 2
DisplayName German:	Farbe 2
DisplayName French:	Couleur 2
DisplayName Italian:	Colore 2
DisplayName Spanish:	Color 2
DefaultColor:	Red = 0, Green = 0, Blue = 0, Alpha = 0
IdentityNumber:	0

(Read only property)

4.113.8   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Gaussian Gradient attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	300
IdentityNumber:	0
SliderMaxNumber:	800
SliderMinNumber:	0

4.113.9   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.113.10   inputColor0 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color 1
Notes:

See AttributeinputColor0 for more details.
(Read and Write property)

Name:	inputColor0
Class:	CIColorMBS (CIColor)
DisplayName English:	Color 1
DisplayName German:	Farbe 1
DisplayName French:	Couleur 1
DisplayName Italian:	Colore 1
DisplayName Spanish:	Color 1
Type:	CIAttributeTypeColor

4.113.11   inputColor1 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color 2
Notes:

Name:	inputColor1
Class:	CIColorMBS (CIColor)
DisplayName English:	Color 2
DisplayName German:	Farbe 2
DisplayName French:	Couleur 2
DisplayName Italian:	Colore 2
DisplayName Spanish:	Color 2
Type:	CIAttributeTypeColor

See AttributeinputColor1 for more details.
(Read and Write property)

4.113.12   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.114 class CIFilterGeneratorMBS

4.114.1 class CIFilterGeneratorMBS

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: An object that creates and configures chains of individual image filters.
Notes: The CIFilterGenerator class provides methods for creating a CIFilter object by chaining together existing CIFilter objects to create complex effects. (A filter chain refers to the CIFilter objects that are connected in the CIFilterGenerator object.) The complex effect can be encapsulated as a CIFilterGenerator object and saved as a file so that it can be used again. The filter generator file contains an archived instance of all the CIFilter objects that are chained together.

Any filter generator files that you copy to /Library/Graphics/Image Units/ are loaded when any of the loading methods provided by the CIPlugIn class are invoked. A CIFilterGenerator object is registered by its filename or, if present, by a class attribute that you supply in its description.

You can create a CIFilterGenerator object programmatically, using the methods provided by the CIFilterGenerator class, or by using the editor view provided by Core Image (see CIFilter Image Kit Additions).
Blog Entries

- MBS Xojo Plugins, version 17.2pr3

4.114.2 Methods

4.114.3 connectObject(sourceObject as Variant, sourceKey as string, targetObject as Variant, targetKey as String)

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Adds an object to the filter chain.
Notes: sourceObject: A CIFilterMBS object, a CIImageMBS object, or a the path (an string or folderitem object) to an image.
sourceKey: The key that specifies the source object. For example, if the source is the output image of a filter, pass the outputImage key. Pass nil if the source object is used directly.
targetObject: The object that to link the source object to.
targetKey: The key that specifies the target for the source. For example, if you are connecting the source to the input image of a CIFilterMBS object, you would pass the inputImage key.

4.114.4 Constructor

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Creates and returns an empty filter generator object.
Notes: You use the returned object to connect two or more CIFilter objects and input images. It is also valid to have only one CIFilter object in a filter generator.
See also:

4.114.5   Constructor(File as folderItem)

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Creates and returns a filter generator object and initializes it with the contents of a filter generator file.
Notes: Raises exception on failure.
See also:

4.114.6   Constructor(Handle as Integer)

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Initializes Xojo object with given handle to CIFilterGenerator object.
See also:

4.114.7   Constructor(URL as string)

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Creates and returns a filter generator object and initializes it with the contents of a filter generator file.
Notes: Raises exception on failure.
See also:

4.114.8   copy as CIFilterGeneratorMBS

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Creates a copy of the object.

4.114.9   disconnectObject(sourceObject as Variant, sourceKey as string, targetObject as Variant, targetKey as String)

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Removes the connection between two objects in the filter chain.
Notes: sourceObject: A CIFilterMBS object, a CIImageMBS object, or a the path (an string or folderitem object) to an image.
sourceKey: The key that specifies the source object. Pass nil if the source object is used directly.
targetObject: The object that you want to disconnect the source object from.
targetKey: The key that specifies the target that the source object is currently connected to.

4.114.10   exportKey(key as string, targetObject as Variant, exportedKeyName as String)

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Exports an input or output key of an object in the filter chain.
Notes: key: The key to export from the target object (for example, inputImage).
targetObject: The object associated with the key (for example, the filter).
exportedKeyName: A unique name to use for the exported key. Pass ”” to use the original key name.

When you create a CIFilterMBS object from a CIFilterGeneratorMBS object, you might want the filter client to be able to set some of the parameters associated with the filter chain. You can make a parameter settable by exporting the key associated with the parameter. If the exported key represents an input parameter of the filter, the key is exported as an input key. If the key represents an output parameter, it is exported as an output key.

4.114.11   filterGenerator as CIFilterGeneratorMBS

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Creates and returns an empty filter generator object.
Notes: You use the returned object to connect two or more CIFilter objects and input images. It is also valid to have only one CIFilter object in a filter generator.

4.114.12   filterGeneratorWithContentsOfFile(File as folderItem) as CIFilterGeneratorMBS

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Creates and returns a filter generator object and initializes it with the contents of a filter generator file.
Notes: Returns a CIFilterGeneratorMBS object; returns nil if the file can‚Äôt be read.

4.114.13   filterGeneratorWithContentsOfURL(URL as string) as CIFilterGeneratorMBS

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Creates and returns a filter generator object and initializes it with the contents of a filter generator file.
Notes: Returns a CIFilterGeneratorMBS object; returns nil if the file can‚Äôt be read.

4.114.14   filterWithName(name as String) as CIFilterMBS

Plugin Version: 17.4, Platform: macOS, Targets: Desktop, Console & Web.

Function: Queries filter based on it's name.
Notes: Returns nil in case of error.

4.114.15   kCIFilterGeneratorExportedKey as String

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: One of the dictionary keys describing exports.
Notes: The key (CIFilterGeneratorExportedKey) for the exported parameter. The associated value is the key name of the parameter you are exporting, such as inputRadius.

4.114.16 kCIFilterGeneratorExportedKeyName as String

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: One of the dictionary keys describing exports.
Notes: The key (CIFilterGeneratorExportedKey) for the exported parameter. The associated value is the key name of the parameter you are exporting, such as inputRadius.

4.114.17 kCIFilterGeneratorExportedKeyTargetObject as String

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: One of the dictionary keys describing exports.
Notes: The target object (CIFilterGeneratorExportedKeyTargetObject) for the exported key. The associated value is the name of the object, such as CIMotionBlur.

4.114.18 registerFilterName(name as string)

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Registers the name associated with a filter chain.
Notes: name: A unique name for the filter chain you want to register.

This method allows you to register the filter chain as a named filter in the Core Image filter repository. You can then create a CIFilterMBS object from it using the the filterWithName method of the CIFilterMBS class.

4.114.19 removeExportedKey(exportedKeyName as string)

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Removes a key that was previously exported.

4.114.20 setAttributes(attributes as dictionary, ExportedKey as string)

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Sets a dictionary of attributes for an exported key.
Notes: attributes: A dictionary that describes the attributes associated with the specified key.
key: The exported key whose attributes you want to set.

By default, the exported key inherits the attributes from its original key and target object. You can use this method to change one or more of the existing attributes for the key, such as the default value or maximum value. For more information on attributes, see CIFilterMBS and Core Image Programming Guide.

4.114.21   writeToFile(File as FolderItem, atomically as Boolean = true) as Boolean

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Archives a filter generator object to a filter generator file.
Notes: File: A location for the file generator file.
atomically: Pass true to specify that Core Image should create an interim file to avoid overwriting an existing file.

Returns true if the the object is successfully archived to the file.
Use this method to save your filter chain to a file for later use.

4.114.22   writeToURL(URL as String, atomically as Boolean = true) as Boolean

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Archives a filter generator object to a filter generator file.
Notes: URL: A location for the file generator file.
atomically: Pass true to specify that Core Image should create an interim file to avoid overwriting an existing file.

Returns true if the the object is successfully archived to the file.
Use this method to save your filter chain to a file for later use.

4.114.23   Properties

4.114.24   classAttributes as Dictionary

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: The class attributes associated with the filter.
Notes: For more information about class attributes for a filter, see Core Image Programming Guide and the filter attributes key constants defined in CIFilterMBS.
(Read and Write property)

4.114.25 exportedKeys as Dictionary

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Returns an array of the exported keys.
Notes: An array of dictionaries that describe the exported key and target object. See kCIFilterGenerator-ExportedKey, kCIFilterGeneratorExportedKeyTargetObject, and kCIFilterGeneratorExportedKey for keys used in the dictionary.

This method returns the keys that you exported using the exportKey method or that were exported before being written to the file from which you read the filter chain.
(Read only property)

4.114.26 filter as CIFilterMBS

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: Creates a filter object based on the filter chain.
Notes: The topology of the filter chain is immutable, meaning that any changes you make to the filter chain are not reflected in the filter. The returned filer has the input an output keys that are exported.
(Read only property)

4.114.27 Handle as Integer

Plugin Version: 17.2, Platform: macOS, Targets: Desktop, Console & Web.

Function: The internal reference to the object.
Notes: (Read only property)

4.115   class CIFilterGlassDistortionMBS

4.115.1   class CIFilterGlassDistortionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Glass Distortion filter.
Notes: Details for this filter:

FilterName:	CIGlassDistortion
DisplayName English:	Glass Distortion
DisplayName German:	Verzerrung ‚ÄûGlas‚Äú
DisplayName French:	D√©formation Verre
DisplayName Italian:	Distorsione vetro
DisplayName Spanish:	Distorsi√n vidriosa

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTexture: Texture

- inputCenter: Center

- inputScale: Scale

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.115.2 Methods

4.115.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.115.4 Properties

4.115.5 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Glass Distortion attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.115.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Glass Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.115.7   AttributeinputScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Glass Distortion attribute.
Notes: This attribute should have this content:

Name:	inputScale
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
DefaultNumber:	200
IdentityNumber:	0
SliderMaxNumber:	500
SliderMinNumber:	0.01

(Read only property)

4.115.8   AttributeinputTexture as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Glass Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputTexture
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Texture
DisplayName German:	Struktur
DisplayName French:	Texture
DisplayName Italian:	Trama
DisplayName Spanish:	Textura
DefaultNumber:	0
IdentityNumber:	0

4.115.9 inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.115.10 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.115.11   inputScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale
Notes:

Name:	inputScale
Class:	double (NSNumber)
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
Type:	CIAttributeTypeDistance

See AttributeinputScale for more details.
(Read and Write property)

4.115.12   inputTexture as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Texture
Notes:

Name:	inputTexture
Class:	CIImageMBS (CIImage)
DisplayName English:	Texture
DisplayName German:	Struktur
DisplayName French:	Texture
DisplayName Italian:	Trama
DisplayName Spanish:	Textura
Type:	CIAttributeTypeImage

See AttributeinputTexture for more details.
(Read and Write property)

4.116   class CIFilterGlassLozengeMBS

4.116.1   class CIFilterGlassLozengeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Glass Lozenge filter.
Notes: Details for this filter:

FilterName:	CIGlassLozenge
DisplayName English:	Glass Lozenge
DisplayName German:	Glasrhombus
DisplayName French:	Losange de verre
DisplayName Italian:	Losanga vetro
DisplayName Spanish:	Romboedro vidrioso

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputPoint0: Point 0

- inputPoint1: Point 1

- inputRadius: Radius

- inputRefraction: Refraction

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.116.2 Methods

4.116.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.116.4 Properties

4.116.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Glass Lozenge attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.116.6 AttributeinputPoint0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Glass Lozenge attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputPoint0
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Point 0
DisplayName German:	Punkt 0
DisplayName French:	Point¬†0
DisplayName Italian:	Punto 0
DisplayName Spanish:	Punto 0
DefaultVector:	[150 150]
IdentityVector:	n/a

4.116.7   AttributeinputPoint1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Glass Lozenge attribute.
Notes: This attribute should have this content:

Name:	inputPoint1
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Point 1
DisplayName German:	Punkt 1
DisplayName French:	Point 1
DisplayName Italian:	Punto 1
DisplayName Spanish:	Punto 1
DefaultVector:	[350 150]
IdentityVector:	n/a

(Read only property)

4.116.8   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Glass Lozenge attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	100
IdentityNumber:	100
SliderMaxNumber:	1000
SliderMinNumber:	0

4.116.9 AttributeinputRefraction as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Glass Lozenge attribute.
Notes: This attribute should have this content:

Name:	inputRefraction
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Refraction
DisplayName German:	Lichtbrechung
DisplayName French:	R√©fraction
DisplayName Italian:	Rifrazione
DisplayName Spanish:	Refracci√n
DefaultNumber:	1.7
IdentityNumber:	1
SliderMaxNumber:	5
SliderMinNumber:	0

(Read only property)

4.116.10 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

(Read and Write property)

4.116.11   inputPoint0 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Point 0
Notes:

Name:	inputPoint0
Class:	CIVectorMBS (CIVector)
DisplayName English:	Point 0
DisplayName German:	Punkt 0
DisplayName French:	Point¬†0
DisplayName Italian:	Punto 0
DisplayName Spanish:	Punto 0
Type:	CIAttributeTypePosition

See AttributeinputPoint0 for more details.
(Read and Write property)

4.116.12   inputPoint1 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Point 1
Notes:

See AttributeinputPoint1 for more details.
(Read and Write property)

Name:	inputPoint1
Class:	CIVectorMBS (CIVector)
DisplayName English:	Point 1
DisplayName German:	Punkt 1
DisplayName French:	Point 1
DisplayName Italian:	Punto 1
DisplayName Spanish:	Punto 1
Type:	CIAttributeTypePosition

4.116.13   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.116.14   inputRefraction as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Refraction
Notes:

Name:	inputRefraction
Class:	double (NSNumber)
DisplayName English:	Refraction
DisplayName German:	Lichtbrechung
DisplayName French:	R√©fraction
DisplayName Italian:	Rifrazione
DisplayName Spanish:	Refracci√n
Type:	CIAttributeTypeScalar

See AttributeinputRefraction for more details.
(Read and Write property)

4.117 class CIFilterGlideReflectedTileMBS

4.117.1 class CIFilterGlideReflectedTileMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Glide Reflected Tile filter.
Notes: Details for this filter:

FilterName:	CIGlideReflectedTile
DisplayName English:	Glide Reflected Tile
DisplayName German:	Gleitende reflektierte Kachel
DisplayName French:	Mosa√Øque r√©fl√©chie ¬´¬†Glide¬†¬ª
DisplayName Italian:	Mosaico riflesso di scivolamento
DisplayName Spanish:	Mosaico de deslizamiento reflejado

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputAngle: Angle

- inputWidth: Width

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.117.2   Methods

4.117.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.117.4   Properties

4.117.5   AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Glide Reflected Tile attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.117.6   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Glide Reflected Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.117.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Glide Reflected Tile attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.117.8   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Glide Reflected Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	100
IdentityNumber:	100
SliderMaxNumber:	200
SliderMinNumber:	1

4.117.9   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.117.10   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

4.117.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.117.12   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.118 class CIFilterGloomMBS

4.118.1 class CIFilterGloomMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Gloom filter.
Notes: Details for this filter:

FilterName:	CIGloom
DisplayName English:	Gloom
DisplayName German:	D√ºster
DisplayName French:	T√©n√®bres
DisplayName Italian:	Oscurit√†
DisplayName Spanish:	Oscurecer

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputRadius: Radius

- inputIntensity: Intensity

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.118.2   Methods

4.118.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.118.4   Properties

4.118.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Gloom attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.118.6   AttributeinputIntensity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Gloom attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputIntensity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
DefaultNumber:	0.5
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.118.7 AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Gloom attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	10
IdentityNumber:	0
SliderMaxNumber:	100
SliderMinNumber:	0

(Read only property)

4.118.8 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

(Read and Write property)

4.118.9   inputIntensity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Intensity
Notes:

Name:	inputIntensity
Class:	double (NSNumber)
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
Type:	CIAttributeTypeScalar

See AttributeinputIntensity for more details.
(Read and Write property)

4.118.10   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

4.119   class CIFilterGuidedFilterMBS

4.119.1   class CIFilterGuidedFilterMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Guided Filter filter.
Notes: Details for this filter:

FilterName:	CIGuidedFilter
DisplayName English:	Guided Filter
DisplayName German:	Gef√ºhrter Filter
DisplayName French:	Filtre guid√©
DisplayName Italian:	Filtro guidato
DisplayName Spanish:	Filtro guiado

Categories:

- CICategoryGeometryAdjustment: Geometry Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputGuideImage: A larger image to use as a guide.

- inputRadius: Radius

- inputEpsilon: Epsilon

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.119.2 Methods

4.119.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.119.4 Properties

4.119.5 AttributeinputEpsilon as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Guided Filter attribute.
Notes: This attribute should have this content:

Name:	inputEpsilon
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Epsilon
DisplayName German:	Epsilon
DisplayName French:	Epsilon
DisplayName Italian:	Ipsilon
DisplayName Spanish:	√âpsilon
DefaultNumber:	0.0001
IdentityNumber:	0
SliderMaxNumber:	0.1
SliderMinNumber:	1.000000e-9

(Read only property)

4.119.6 AttributeinputGuideImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Guided Filter attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputGuideImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	A larger image to use as a guide.
DisplayName German:	Gr√√üeres Bild, das als Richtwert verwendet wird.
DisplayName French:	Une image plus grande √† utiliser comme guide.
DisplayName Italian:	Immagine pi√ grande da utilizzare come guida.
DisplayName Spanish:	Una imagen mayor que se usar√° como gu√a.
DefaultNumber:	0
IdentityNumber:	0

4.119.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Guided Filter attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.119.8   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Guided Filter attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	1
IdentityNumber:	0
SliderMaxNumber:	10
SliderMinNumber:	1

4.119.9   inputEpsilon as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Epsilon
Notes:

Name:	inputEpsilon
Class:	double (NSNumber)
DisplayName English:	Epsilon
DisplayName German:	Epsilon
DisplayName French:	Epsilon
DisplayName Italian:	Ipsilon
DisplayName Spanish:	√âpsilon
Type:	CIAttributeTypeScalar

See AttributeinputEpsilon for more details.
(Read and Write property)

4.119.10   inputGuideImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute A larger image to use as a guide.
Notes:

See AttributeinputGuideImage for more details.
(Read and Write property)

Name:	inputGuideImage
Class:	CIImageMBS (CIImage)
DisplayName English:	A larger image to use as a guide.
DisplayName German:	Gr√√üeres Bild, das als Richtwert verwendet wird.
DisplayName French:	Une image plus grande √† utiliser comme guide.
DisplayName Italian:	Immagine pi√ grande da utilizzare come guida.
DisplayName Spanish:	Una imagen mayor que se usar√° como gu√a.
Type:	CIAttributeTypeImage

4.119.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.119.12   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeScalar

See AttributeinputRadius for more details.
(Read and Write property)

4.120   class CIFilterHardLightBlendModeMBS

4.120.1   class CIFilterHardLightBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Hard Light Blend Mode filter.
Notes: Details for this filter:

FilterName:	CIHardLightBlendMode
DisplayName English:	Hard Light Blend Mode
DisplayName German:	Mischmethode ‚ÄûHartes Licht‚Äú
DisplayName French:	Mode de fusion Lumi√®re crue
DisplayName Italian:	Modalit√† sfumatura luce intensa
DisplayName Spanish:	Modo de mezcla por luz directa

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.120.2 Methods

4.120.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.120.4 Properties

4.120.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hard Light Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.120.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hard Light Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.120.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.120.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.121   class CIFilterHatchedScreenMBS

4.121.1   class CIFilterHatchedScreenMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Hatched Screen filter.
Notes: Details for this filter:

FilterName:	CIHatchedScreen
DisplayName English:	Hatched Screen
DisplayName German:	Schraffierter Bereich
DisplayName French:	√âcran √† traits parall√®les
DisplayName Italian:	Schermo ombreggiato
DisplayName Spanish:	Pantalla tramada

Categories:

- CICategoryHalftoneEffect: Halftone Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputCenter: Center

- inputAngle: Angle

- inputWidth: Width

- inputSharpness: Sharpness

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.121.2   Methods

4.121.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.121.4   Properties

4.121.5   AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hatched Screen attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.121.6   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hatched Screen attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.121.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hatched Screen attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.121.8   AttributeinputSharpness as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hatched Screen attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputSharpness
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
DefaultNumber:	0.7
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.121.9 AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hatched Screen attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	6
IdentityNumber:	0
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	50
SliderMinNumber:	2

(Read only property)

4.121.10 inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.121.11   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.121.12   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.121.13 inputSharpness as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Sharpness
Notes:

Name:	inputSharpness
Class:	double (NSNumber)
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
Type:	CIAttributeTypeScalar

See AttributeinputSharpness for more details.
(Read and Write property)

4.121.14 inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.122 class CIFilterHeightFieldFromMaskMBS

4.122.1 class CIFilterHeightFieldFromMaskMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Height Field From Mask filter.
Notes: Details for this filter:

FilterName:	CIHeightFieldFromMask
DisplayName English:	Height Field From Mask
DisplayName German:	H√henwerte von Maske
DisplayName French:	Champ de hauteur du masque
DisplayName Italian:	Altezza campo dalla maschera
DisplayName Spanish:	Campo de altura a partir de m√°scara

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.122.2 Methods

4.122.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.122.4   Properties

4.122.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Height Field From Mask attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.122.6   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Height Field From Mask attribute.
Notes: This attribute should have this content:

(Read only property)

4.122.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	10
IdentityNumber:	10
SliderMaxNumber:	300
SliderMinNumber:	0

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.122.8   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.123 class CIFilterHexagonalPixellateMBS

4.123.1 class CIFilterHexagonalPixellateMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Hexagonal Pixelate filter.
Notes: Details for this filter:

FilterName:	CIHexagonalPixellate
DisplayName English:	Hexagonal Pixelate
DisplayName German:	Hexagonales Verpixeln
DisplayName French:	Pixellisation hexagonale
DisplayName Italian:	Effetto pixel esagonale
DisplayName Spanish:	Pixelado hexagonal

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputCenter: Center

- inputScale: Scale

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.123.2   Methods

4.123.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.123.4   Properties

4.123.5   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hexagonal Pixelate attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.123.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hexagonal Pixelate attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.123.7   AttributeinputScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hexagonal Pixelate attribute.
Notes: This attribute should have this content:

Name:	inputScale
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
DefaultNumber:	8
IdentityNumber:	1
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	100
SliderMinNumber:	1

(Read only property)

4.123.8   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

(Read and Write property)

4.123.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.123.10   inputScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale
Notes:

See AttributeinputScale for more details.
(Read and Write property)

Name:	inputScale
Class:	double (NSNumber)
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
Type:	CIAttributeTypeDistance

4.124   class CIFilterHighlightShadowAdjustMBS

4.124.1   class CIFilterHighlightShadowAdjustMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Highlight and Shadow Adjust filter.
Notes: Details for this filter:

FilterName:	CIHighlightShadowAdjust
DisplayName English:	Highlight and Shadow Adjust
DisplayName German:	Helle und dunkle Bereiche anpassen
DisplayName French:	Ajuster les lumi√®res et les ombres
DisplayName Italian:	Regolazione luce e ombre
DisplayName Spanish:	Ajuste de resaltados y sombras

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputRadius: Radius

- inputShadowAmount: Shadow Amount

- inputHighlightAmount: Highlight Amount

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Real Studio Plugins, version 13.1pr5

4.124.2 Methods

4.124.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.124.4 Properties

4.124.5 AttributeinputHighlightAmount as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Highlight and Shadow Adjust attribute.
Notes: This attribute should have this content:

Name:	inputHighlightAmount
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Highlight Amount
DisplayName German:	St√§rke der Hervorhebung
DisplayName French:	Quantit√© de surbrillance
DisplayName Italian:	Quantit√† luci
DisplayName Spanish:	Cantidad de resaltados
DefaultNumber:	1
IdentityNumber:	1
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0.3

(Read only property)

4.124.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Highlight and Shadow Adjust attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.124.7   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Highlight and Shadow Adjust attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	10
SliderMinNumber:	0

(Read only property)

4.124.8   AttributeinputShadowAmount as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Highlight and Shadow Adjust attribute.
Notes: This attribute should have this content:

Name:	inputShadowAmount
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Shadow Amount
DisplayName German:	Schattenumfang
DisplayName French:	Quantit√© d‚Äôombre
DisplayName Italian:	Quantit√† ombreggiatura
DisplayName Spanish:	Cantidad de sombreado
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	-1
SliderMaxNumber:	1
SliderMinNumber:	-1

(Read only property)

4.124.9 inputHighlightAmount as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Highlight Amount
Notes:

Name:	inputHighlightAmount
Class:	double (NSNumber)
DisplayName English:	Highlight Amount
DisplayName German:	St√§rke der Hervorhebung
DisplayName French:	Quantit√© de surbrillance
DisplayName Italian:	Quantit√† luci
DisplayName Spanish:	Cantidad de resaltados
Type:	CIAttributeTypeScalar

See AttributeinputHighlightAmount for more details.
(Read and Write property)

4.124.10 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.124.11   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeScalar

See AttributeinputRadius for more details.
(Read and Write property)

4.124.12   inputShadowAmount as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Shadow Amount
Notes:

See AttributeinputShadowAmount for more details.
(Read and Write property)

Name:	inputShadowAmount
Class:	double (NSNumber)
DisplayName English:	Shadow Amount
DisplayName German:	Schattenumfang
DisplayName French:	Quantit√© d‚Äôombre
DisplayName Italian:	Quantit√† ombreggiatura
DisplayName Spanish:	Cantidad de sombreado
Type:	CIAttributeTypeScalar

4.125   class CIFilterHistogramDisplayFilterMBS

4.125.1   class CIFilterHistogramDisplayFilterMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Histogram Display filter.
Notes: Details for this filter:

FilterName:	CIHistogramDisplayFilter
DisplayName English:	Histogram Display
DisplayName German:	Histogrammanzeige
DisplayName French:	Affichage de l,Äôhistogramme
DisplayName Italian:	Visualizzazione istogramma
DisplayName Spanish:	Visualizaci√n de histograma

Categories:

- CICategoryReduction: Reduction

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputHeight: Height

- inputHighLimit: High Limit

- inputLowLimit: Low Limit

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- [MBS Real Studio Plugins, version 13.1pr5](#)

4.125.2   Methods

4.125.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.125.4   Properties

4.125.5   AttributeinputHeight as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Histogram Display attribute.
Notes: This attribute should have this content:

Name:	inputHeight
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Height
DefaultNumber:	100
IdentityNumber:	0
MaxNumber:	200
MinNumber:	1
SliderMaxNumber:	100
SliderMinNumber:	1

(Read only property)

4.125.6   AttributeinputHighLimit as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Histogram Display attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputHighLimit
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	High Limit
DisplayName German:	H√chstgrenze
DisplayName French:	Limite sup√©rieure
DisplayName Italian:	Limite superiore
DisplayName Spanish:	L√mite superior
DefaultNumber:	1
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.125.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Histogram Display attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.125.8   AttributeinputLowLimit as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Histogram Display attribute.
Notes: This attribute should have this content:

Name:	inputLowLimit
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Low Limit
DisplayName German:	Niedrigste Grenze
DisplayName French:	Limite inf√©rieure
DisplayName Italian:	Limite inferiore
DisplayName Spanish:	L√mite inferior
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.125.9   inputHeight as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Height
Notes:

Name:	inputHeight
Class:	double (NSNumber)
DisplayName English:	Height
DisplayName German:	Height
DisplayName French:	Height
DisplayName Italian:	Height
DisplayName Spanish:	Height
Type:	CIAttributeTypeScalar

See AttributeinputHeight for more details.
(Read and Write property)

4.125.10   inputHighLimit as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute High Limit
Notes:

Name:	inputHighLimit
Class:	double (NSNumber)
DisplayName English:	High Limit
DisplayName German:	H√chstgrenze
DisplayName French:	Limite sup√©rieure
DisplayName Italian:	Limite superiore
DisplayName Spanish:	L√mite superior
Type:	CIAttributeTypeScalar

See AttributeinputHighLimit for more details.
(Read and Write property)

4.125.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.125.12   inputLowLimit as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Low Limit
Notes:

See AttributeinputLowLimit for more details.
(Read and Write property)

Name:	inputLowLimit
Class:	double (NSNumber)
DisplayName English:	Low Limit
DisplayName German:	Niedrigste Grenze
DisplayName French:	Limite inf√©rieure
DisplayName Italian:	Limite inferiore
DisplayName Spanish:	L√mite inferior
Type:	CIAttributeTypeScalar

4.126   class CIFilterHoleDistortionMBS

4.126.1   class CIFilterHoleDistortionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Hole Distortion filter.
Notes: Details for this filter:

FilterName:	CIHoleDistortion
DisplayName English:	Hole Distortion
DisplayName German:	Verzerrung ‚ÄûLoch‚Äú
DisplayName French:	D√©formation Orifice
DisplayName Italian:	Distorsione foro
DisplayName Spanish:	Distorsi√n de orificios

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.126.2   Methods

4.126.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.126.4   Properties

4.126.5   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hole Distortion attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.126.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hole Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.126.7   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hole Distortion attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	150
IdentityNumber:	0.1
MaxNumber:	0
MinNumber:	0.01
SliderMaxNumber:	1000
SliderMinNumber:	0.01

(Read only property)

4.126.8   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

(Read and Write property)

4.126.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.126.10   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

4.127 class CIFilterHueAdjustMBS

4.127.1 class CIFilterHueAdjustMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Hue Adjust filter.
Notes: Details for this filter:

FilterName:	CIHueAdjust
DisplayName English:	Hue Adjust
DisplayName German:	Farbton anpassen
DisplayName French:	Ajustement de tonalit√©
DisplayName Italian:	Regolazione tonalit√†
DisplayName Spanish:	Ajuste de matiz

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputAngle: Angle

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.127.2   Methods

4.127.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.127.4   Properties

4.127.5   AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hue Adjust attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.127.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hue Adjust attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.127.7 inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.127.8 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.128 class CIFilterHueBlendModeMBS

4.128.1 class CIFilterHueBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Hue Blend Mode filter.
Notes: Details for this filter:

FilterName:	CIHueBlendMode
DisplayName English:	Hue Blend Mode
DisplayName German:	Mischmethode ‚ÄûFarbton‚Äú
DisplayName French:	Mode de fusion Tonalit√©
DisplayName Italian:	Modalit√† sfumatura tonalit√†
DisplayName Spanish:	Modo de mezcla de matiz

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.128.2   Methods

4.128.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.128.4   Properties

4.128.5   AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hue Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.128.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hue Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.128.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d,Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.128.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.129 class CIFilterHueSaturationValueGradientMBS

4.129.1 class CIFilterHueSaturationValueGradientMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Hue/Saturation/Value Gradient filter.
Notes: Details for this filter:

FilterName:	CIHueSaturationValueGradient
DisplayName English:	Hue/Saturation/Value Gradient
DisplayName German:	Farbton/S√§ttigung/Wertverlauf
DisplayName French:	D√©grad√© de teinte/saturation/valeur
DisplayName Italian:	Tonalit√†/saturazione/valore gradiente
DisplayName Spanish:	Degradado de matiz/saturaci√n/valor

Categories:

- CICategoryGradient: Gradient

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputValue: Value

- inputRadius: Radius

- inputSoftness: Softness

- inputDither: Dither

- inputColorSpace: Color Space

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.129.2   Methods

4.129.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.129.4   Properties

4.129.5   AttributeinputColorSpace as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hue/Saturation/Value Gradient attribute.
Notes: This attribute should have this content:

Name:	inputColorSpace
Class:	CGColorSpaceMBS
DisplayName English:	Color Space
DisplayName German:	Farbraum
DisplayName French:	Espace colorim√©trique
DisplayName Italian:	Spazio colore
DisplayName Spanish:	Espacio de color
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.129.6   AttributeinputDither as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hue/Saturation/Value Gradient attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputDither
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Dither
DefaultNumber:	1
IdentityNumber:	0
SliderMaxNumber:	3
SliderMinNumber:	0

4.129.7 AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hue/Saturation/Value Gradient attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	300
IdentityNumber:	0
SliderMaxNumber:	800
SliderMinNumber:	0

(Read only property)

4.129.8 AttributeinputSoftness as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hue/Saturation/Value Gradient attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputSoftness
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Softness
DefaultNumber:	1
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.129.9 AttributeinputValue as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Hue/Saturation/Value Gradient attribute.
Notes: This attribute should have this content:

Name:	inputValue
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Value
DefaultNumber:	1
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.129.10 inputColorSpace as CGColorSpaceMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color Space
Notes:

Name:	inputColorSpace
Class:	CGColorSpaceMBS (NSObject)
DisplayName English:	Color Space
DisplayName German:	Farbraum
DisplayName French:	Espace colorim√©trique
DisplayName Italian:	Spazio colore
DisplayName Spanish:	Espacio de color

See AttributeinputColorSpace for more details.
(Read and Write property)

4.129.11   inputDither as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Dither
Notes:

Name:	inputDither
Class:	double (NSNumber)
DisplayName English:	Dither
DisplayName German:	Dither
DisplayName French:	Dither
DisplayName Italian:	Dither
DisplayName Spanish:	Dither
Type:	CIAttributeTypeScalar

See AttributeinputDither for more details.
(Read and Write property)

4.129.12   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.129.13   inputSoftness as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Softness
Notes:

Name:	inputSoftness
Class:	double (NSNumber)
DisplayName English:	Softness
DisplayName German:	Softness
DisplayName French:	Softness
DisplayName Italian:	Softness
DisplayName Spanish:	Softness
Type:	CIAttributeTypeScalar

See AttributeinputSoftness for more details.
(Read and Write property)

4.129.14   inputValue as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Value
Notes:

Name:	inputValue
Class:	double (NSNumber)
DisplayName English:	Value
DisplayName German:	Value
DisplayName French:	Value
DisplayName Italian:	Value
DisplayName Spanish:	Value
Type:	CIAttributeTypeScalar

See AttributeinputValue for more details.
(Read and Write property)

4.130 class CIFilterKaleidoscopeMBS

4.130.1 class CIFilterKaleidoscopeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Kaleidoscope filter.
Notes: Details for this filter:

FilterName:	CIKaleidoscope
DisplayName English:	Kaleidoscope
DisplayName German:	Kaleidoskop
DisplayName French:	Kal√©idoscope
DisplayName Italian:	Caleidoscopio
DisplayName Spanish:	Caleidoscopio

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCount: Count

- inputCenter: Center

- inputAngle: Angle

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.130.2   Methods

4.130.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.130.4   Properties

4.130.5   AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Kaleidoscope attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.130.6   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Kaleidoscope attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.130.7 AttributeinputCount as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Kaleidoscope attribute.
Notes: This attribute should have this content:

Name:	inputCount
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Count
DisplayName German:	Anzahl
DisplayName French:	Compte
DisplayName Italian:	Conteggio
DisplayName Spanish:	Recuento
DefaultNumber:	6
IdentityNumber:	0
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	64
SliderMinNumber:	1

(Read only property)

4.130.8 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Kaleidoscope attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.130.9   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.130.10   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

4.130.11   inputCount as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Count
Notes:

Name:	inputCount
Class:	double (NSNumber)
DisplayName English:	Count
DisplayName German:	Anzahl
DisplayName French:	Compte
DisplayName Italian:	Conteggio
DisplayName Spanish:	Recuento
Type:	CIAttributeTypeScalar

See AttributeinputCount for more details.
(Read and Write property)

4.130.12   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.131   class CIFilterKeystoneCorrectionCombinedMBS

4.131.1   class CIFilterKeystoneCorrectionCombinedMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Combined Keystone Correction filter.
Notes: Details for this filter:

FilterName:	CIKeystoneCorrectionCombined
DisplayName English:	Combined Keystone Correction
DisplayName German:	Kombinierte Trapezkorrektur
DisplayName French:	Correction de trap√®ze combin√©e
DisplayName Italian:	Correzione trapezio combinata
DisplayName Spanish:	Correcci√n trapezoidal combinada

Categories:

- CICategoryGeometryAdjustment: Geometry Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputFocalLength: Focal Length

- inputTopLeft: Top Left

- inputTopRight: Top Right

- inputBottomRight: Bottom Right

- inputBottomLeft: Bottom Left

Output:

- outputImage

- outputTransform

- outputRotationFilter

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.131.2   Methods

4.131.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.131.4   Properties

4.131.5   AttributeinputBottomLeft as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Combined Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputBottomLeft
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Bottom Left
DisplayName German:	Unten links
DisplayName French:	En bas √† gauche
DisplayName Italian:	In basso a sinistra
DisplayName Spanish:	Abajo izquierda
DefaultVector:	n/a
IdentityVector:	n/a

(Read only property)

4.131.6 AttributeinputBottomRight as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Combined Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputBottomRight
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Bottom Right
DisplayName German:	Unten rechts
DisplayName French:	En bas √† droite
DisplayName Italian:	In basso a destra
DisplayName Spanish:	Abajo derecha
DefaultVector:	n/a
IdentityVector:	n/a

(Read only property)

4.131.7 AttributeinputFocalLength as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Combined Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputFocalLength
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Focal Length
DisplayName German:	Brennweite
DisplayName French:	Longueur focale
DisplayName Italian:	Lunghezza focale
DisplayName Spanish:	Longitud focal
DefaultNumber:	28
IdentityNumber:	0

(Read only property)

4.131.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Combined Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.131.9   AttributeinputTopLeft as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Combined Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputTopLeft
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Top Left
DisplayName German:	Oben links
DisplayName French:	En haut √† gauche
DisplayName Italian:	In alto a sinistra
DisplayName Spanish:	Arriba izquierda
DefaultVector:	n/a
IdentityVector:	n/a

(Read only property)

4.131.10   AttributeinputTopRight as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Combined Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputTopRight
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Top Right
DisplayName German:	Oben rechts
DisplayName French:	En haut √† droite
DisplayName Italian:	In alto a destra
DisplayName Spanish:	Arriba derecha
DefaultVector:	n/a
IdentityVector:	n/a

(Read only property)

4.131.11   inputBottomLeft as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Bottom Left
Notes:

Name:	inputBottomLeft
Class:	CIVectorMBS (CIVector)
DisplayName English:	Bottom Left
DisplayName German:	Unten links
DisplayName French:	En bas √† gauche
DisplayName Italian:	In basso a sinistra
DisplayName Spanish:	Abajo izquierda
Type:	CIAttributeTypePosition

See AttributeinputBottomLeft for more details.
(Read and Write property)

4.131.12   inputBottomRight as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Bottom Right
Notes:

Name:	inputBottomRight
Class:	CIVectorMBS (CIVector)
DisplayName English:	Bottom Right
DisplayName German:	Unten rechts
DisplayName French:	En bas √† droite
DisplayName Italian:	In basso a destra
DisplayName Spanish:	Abajo derecha
Type:	CIAttributeTypePosition

See AttributeinputBottomRight for more details.
(Read and Write property)

4.131.13   inputFocalLength as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Focal Length
Notes:

Name:	inputFocalLength
Class:	double (NSNumber)
DisplayName English:	Focal Length
DisplayName German:	Brennweite
DisplayName French:	Longueur focale
DisplayName Italian:	Lunghezza focale
DisplayName Spanish:	Longitud focal
Type:	CIAttributeTypeScalar

See AttributeinputFocalLength for more details.
(Read and Write property)

4.131.14   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.131.15 inputTopLeft as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Top Left
Notes:

Name:	inputTopLeft
Class:	CIVectorMBS (CIVector)
DisplayName English:	Top Left
DisplayName German:	Oben links
DisplayName French:	En haut √† gauche
DisplayName Italian:	In alto a sinistra
DisplayName Spanish:	Arriba izquierda
Type:	CIAttributeTypePosition

See AttributeinputTopLeft for more details.
(Read and Write property)

4.131.16 inputTopRight as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Top Right
Notes:

Name:	inputTopRight
Class:	CIVectorMBS (CIVector)
DisplayName English:	Top Right
DisplayName German:	Oben rechts
DisplayName French:	En haut √† droite
DisplayName Italian:	In alto a destra
DisplayName Spanish:	Arriba derecha
Type:	CIAttributeTypePosition

See AttributeinputTopRight for more details.
(Read and Write property)

4.132 class CIFilterKeystoneCorrectionHorizontalMBS

4.132.1 class CIFilterKeystoneCorrectionHorizontalMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Horizontal Keystone Correction filter.
Notes: Details for this filter:

FilterName:	CIKeystoneCorrectionHorizontal
DisplayName English:	Horizontal Keystone Correction
DisplayName German:	Horizontale Trapezkorrektur
DisplayName French:	Correction de trap√®ze horizontale
DisplayName Italian:	Correzione trapezio orizzontale
DisplayName Spanish:	Correcci√n trapezoidal horizontal

Categories:

- CICategoryGeometryAdjustment: Geometry Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputFocalLength: Focal Length

- inputTopLeft: Top Left

- inputTopRight: Top Right

- inputBottomRight: Bottom Right

- inputBottomLeft: Bottom Left

Output:

- outputImage

- outputTransform

- outputRotationFilter

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.132.2 Methods

4.132.3 Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.132.4 Properties

4.132.5 AttributeinputBottomLeft as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Horizontal Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputBottomLeft
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Bottom Left
DisplayName German:	Unten links
DisplayName French:	En bas √† gauche
DisplayName Italian:	In basso a sinistra
DisplayName Spanish:	Abajo izquierda
DefaultVector:	n/a
IdentityVector:	n/a

(Read only property)

4.132.6 AttributeinputBottomRight as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Horizontal Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputBottomRight
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Bottom Right
DisplayName German:	Unten rechts
DisplayName French:	En bas √† droite
DisplayName Italian:	In basso a destra
DisplayName Spanish:	Abajo derecha
DefaultVector:	n/a
IdentityVector:	n/a

(Read only property)

4.132.7 AttributeinputFocalLength as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Horizontal Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputFocalLength
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Focal Length
DisplayName German:	Brennweite
DisplayName French:	Longueur focale
DisplayName Italian:	Lunghezza focale
DisplayName Spanish:	Longitud focal
DefaultNumber:	28
IdentityNumber:	0

(Read only property)

4.132.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Horizontal Keystone Correction attribute.
Notes: This attribute should have this content:

  Name: inputImage

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.132.9   AttributeinputTopLeft as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Horizontal Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputTopLeft
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Top Left
DisplayName German:	Oben links
DisplayName French:	En haut √† gauche
DisplayName Italian:	In alto a sinistra
DisplayName Spanish:	Arriba izquierda
DefaultVector:	n/a
IdentityVector:	n/a

(Read only property)

4.132.10   AttributeinputTopRight as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Horizontal Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputTopRight
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Top Right
DisplayName German:	Oben rechts
DisplayName French:	En haut √† droite
DisplayName Italian:	In alto a destra
DisplayName Spanish:	Arriba derecha
DefaultVector:	n/a
IdentityVector:	n/a

(Read only property)

4.132.11   inputBottomLeft as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Bottom Left
Notes:

Name:	inputBottomLeft
Class:	CIVectorMBS (CIVector)
DisplayName English:	Bottom Left
DisplayName German:	Unten links
DisplayName French:	En bas √† gauche
DisplayName Italian:	In basso a sinistra
DisplayName Spanish:	Abajo izquierda
Type:	CIAttributeTypePosition

See AttributeinputBottomLeft for more details.
(Read and Write property)

4.132.12   inputBottomRight as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Bottom Right
Notes:

Name:	inputBottomRight
Class:	CIVectorMBS (CIVector)
DisplayName English:	Bottom Right
DisplayName German:	Unten rechts
DisplayName French:	En bas √† droite
DisplayName Italian:	In basso a destra
DisplayName Spanish:	Abajo derecha
Type:	CIAttributeTypePosition

See AttributeinputBottomRight for more details.
(Read and Write property)

4.132.13   inputFocalLength as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Focal Length
Notes:

Name:	inputFocalLength
Class:	double (NSNumber)
DisplayName English:	Focal Length
DisplayName German:	Brennweite
DisplayName French:	Longueur focale
DisplayName Italian:	Lunghezza focale
DisplayName Spanish:	Longitud focal
Type:	CIAttributeTypeScalar

See AttributeinputFocalLength for more details.
(Read and Write property)

4.132.14   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.132.15 inputTopLeft as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Top Left
Notes:

Name:	inputTopLeft
Class:	CIVectorMBS (CIVector)
DisplayName English:	Top Left
DisplayName German:	Oben links
DisplayName French:	En haut √† gauche
DisplayName Italian:	In alto a sinistra
DisplayName Spanish:	Arriba izquierda
Type:	CIAttributeTypePosition

See AttributeinputTopLeft for more details.
(Read and Write property)

4.132.16 inputTopRight as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Top Right
Notes:

Name:	inputTopRight
Class:	CIVectorMBS (CIVector)
DisplayName English:	Top Right
DisplayName German:	Oben rechts
DisplayName French:	En haut √† droite
DisplayName Italian:	In alto a destra
DisplayName Spanish:	Arriba derecha
Type:	CIAttributeTypePosition

See AttributeinputTopRight for more details.
(Read and Write property)

4.133 class CIFilterKeystoneCorrectionVerticalMBS

4.133.1 class CIFilterKeystoneCorrectionVerticalMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Vertical Keystone Correction filter.
Notes: Details for this filter:

FilterName:	CIKeystoneCorrectionVertical
DisplayName English:	Vertical Keystone Correction
DisplayName German:	Vertikale Trapezkorrektur
DisplayName French:	Correction de trap√®ze verticale
DisplayName Italian:	Correzione trapezio verticale
DisplayName Spanish:	Correcci√n trapezoidal vertical

Categories:

- CICategoryGeometryAdjustment: Geometry Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputFocalLength: Focal Length

- inputTopLeft: Top Left

- inputTopRight: Top Right

- inputBottomRight: Bottom Right

- inputBottomLeft: Bottom Left

Output:

- outputImage

- outputTransform

- outputRotationFilter

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.133.2   Methods

4.133.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.133.4   Properties

4.133.5   AttributeinputBottomLeft as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Vertical Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputBottomLeft
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Bottom Left
DisplayName German:	Unten links
DisplayName French:	En bas √† gauche
DisplayName Italian:	In basso a sinistra
DisplayName Spanish:	Abajo izquierda
DefaultVector:	n/a
IdentityVector:	n/a

(Read only property)

4.133.6 AttributeinputBottomRight as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Vertical Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputBottomRight
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Bottom Right
DisplayName German:	Unten rechts
DisplayName French:	En bas √† droite
DisplayName Italian:	In basso a destra
DisplayName Spanish:	Abajo derecha
DefaultVector:	n/a
IdentityVector:	n/a

(Read only property)

4.133.7 AttributeinputFocalLength as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Vertical Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputFocalLength
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Focal Length
DisplayName German:	Brennweite
DisplayName French:	Longueur focale
DisplayName Italian:	Lunghezza focale
DisplayName Spanish:	Longitud focal
DefaultNumber:	28
IdentityNumber:	0

(Read only property)

4.133.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Vertical Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.133.9   AttributeinputTopLeft as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Vertical Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputTopLeft
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Top Left
DisplayName German:	Oben links
DisplayName French:	En haut √† gauche
DisplayName Italian:	In alto a sinistra
DisplayName Spanish:	Arriba izquierda
DefaultVector:	n/a
IdentityVector:	n/a

(Read only property)

4.133.10 AttributeinputTopRight as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Vertical Keystone Correction attribute.
Notes: This attribute should have this content:

Name:	inputTopRight
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Top Right
DisplayName German:	Oben rechts
DisplayName French:	En haut √† droite
DisplayName Italian:	In alto a destra
DisplayName Spanish:	Arriba derecha
DefaultVector:	n/a
IdentityVector:	n/a

(Read only property)

4.133.11 inputBottomLeft as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Bottom Left
Notes:

Name:	inputBottomLeft
Class:	CIVectorMBS (CIVector)
DisplayName English:	Bottom Left
DisplayName German:	Unten links
DisplayName French:	En bas √† gauche
DisplayName Italian:	In basso a sinistra
DisplayName Spanish:	Abajo izquierda
Type:	CIAttributeTypePosition

See AttributeinputBottomLeft for more details.
(Read and Write property)

4.133.12 inputBottomRight as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Bottom Right
Notes:

Name:	inputBottomRight
Class:	CIVectorMBS (CIVector)
DisplayName English:	Bottom Right
DisplayName German:	Unten rechts
DisplayName French:	En bas √† droite
DisplayName Italian:	In basso a destra
DisplayName Spanish:	Abajo derecha
Type:	CIAttributeTypePosition

See AttributeinputBottomRight for more details.
(Read and Write property)

4.133.13   inputFocalLength as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Focal Length
Notes:

Name:	inputFocalLength
Class:	double (NSNumber)
DisplayName English:	Focal Length
DisplayName German:	Brennweite
DisplayName French:	Longueur focale
DisplayName Italian:	Lunghezza focale
DisplayName Spanish:	Longitud focal
Type:	CIAttributeTypeScalar

See AttributeinputFocalLength for more details.
(Read and Write property)

4.133.14   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.133.15   inputTopLeft as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Top Left
Notes:

Name:	inputTopLeft
Class:	CIVectorMBS (CIVector)
DisplayName English:	Top Left
DisplayName German:	Oben links
DisplayName French:	En haut √† gauche
DisplayName Italian:	In alto a sinistra
DisplayName Spanish:	Arriba izquierda
Type:	CIAttributeTypePosition

See AttributeinputTopLeft for more details.
(Read and Write property)

4.133.16   inputTopRight as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Top Right
Notes:

Name:	inputTopRight
Class:	CIVectorMBS (CIVector)
DisplayName English:	Top Right
DisplayName German:	Oben rechts
DisplayName French:	En haut √† droite
DisplayName Italian:	In alto a destra
DisplayName Spanish:	Arriba derecha
Type:	CIAttributeTypePosition

See AttributeinputTopRight for more details.
(Read and Write property)

4.134   class CIFilterKMeansMBS

4.134.1   class CIFilterKMeansMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage KMeans filter.
Notes: Details for this filter:

FilterName:	CIKMeans
DisplayName English:	KMeans
DisplayName German:	KMeans
DisplayName French:	K-moyennes
DisplayName Italian:	KMeans
DisplayName Spanish:	KMeans

Categories:

- CICategoryReduction: Reduction

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputExtent: Extent

- inputMeans: Means

- inputCount: Count

- inputPasses: Passes

- inputPerceptual: Perceptual

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- [MBS Xojo Plugins, version 23.0pr5](#)

4.134.2   Methods

4.134.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.134.4   Properties

4.134.5   AttributeinputCount as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the KMeans attribute.
Notes: This attribute should have this content:

Name:	inputCount
Class:	double
Type:	CIAttributeTypeCount
DisplayName English:	Count
DisplayName German:	Anzahl
DisplayName French:	Compte
DisplayName Italian:	Conteggio
DisplayName Spanish:	Recuento
DefaultNumber:	8
IdentityNumber:	0
MaxNumber:	128
MinNumber:	0

(Read only property)

4.134.6   AttributeinputExtent as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the KMeans attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 640 80]
IdentityVector:	n/a

(Read only property)

4.134.7 AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the KMeans attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.134.8 AttributeinputMeans as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the KMeans attribute.
Notes: This attribute should have this content:

Name:	inputMeans
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName:	Means
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.134.9   AttributeinputPasses as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the KMeans attribute.
Notes: This attribute should have this content:

Name:	inputPasses
Class:	double
Type:	CIAttributeTypeCount
DisplayName:	Passes
DefaultNumber:	5
IdentityNumber:	0
MaxNumber:	20
MinNumber:	0

(Read only property)

4.134.10   AttributeinputPerceptual as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the KMeans attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputPerceptual
Class:	double
Type:	CIAttributeTypeBoolean
DisplayName:	Perceptual
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0

4.134.11   inputCount as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Count
Notes:

Name:	inputCount
Class:	double (NSNumber)
DisplayName English:	Count
DisplayName German:	Anzahl
DisplayName French:	Compte
DisplayName Italian:	Conteggio
DisplayName Spanish:	Recuento
Type:	CIAttributeTypeCount

See AttributeinputCount for more details.
(Read and Write property)

4.134.12   inputExtent as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

See AttributeinputExtent for more details.
(Read and Write property)

4.134.13   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.134.14   inputMeans as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Means
Notes:

Name:	inputMeans
Class:	CIImageMBS (CIImage)
DisplayName English:	Means
DisplayName German:	Means
DisplayName French:	Means
DisplayName Italian:	Means
DisplayName Spanish:	Means
Type:	CIAttributeTypeImage

See AttributeinputMeans for more details.
(Read and Write property)

4.134.15   inputPasses as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Passes
Notes:

Name:	inputPasses
Class:	double (NSNumber)
DisplayName English:	Passes
DisplayName German:	Passes
DisplayName French:	Passes
DisplayName Italian:	Passes
DisplayName Spanish:	Passes
Type:	CIAttributeTypeCount

See AttributeinputPasses for more details.
(Read and Write property)

4.134.16   inputPerceptual as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Perceptual
Notes:

Name:	inputPerceptual
Class:	double (NSNumber)
DisplayName English:	Perceptual
DisplayName German:	Perceptual
DisplayName French:	Perceptual
DisplayName Italian:	Perceptual
DisplayName Spanish:	Perceptual
Type:	CIAttributeTypeBoolean

See AttributeinputPerceptual for more details.
(Read and Write property)

4.135   class CIFilterLabDeltaEMBS

4.135.1   class CIFilterLabDeltaEMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Lab ‚àÜE filter.
Notes: Details for this filter:

FilterName:	CILabDeltaE
DisplayName English:	Lab ‚àÜE
DisplayName German:	Lab ‚àÜE
DisplayName French:	Lab ‚àÜE
DisplayName Italian:	Lab ‚àÜE
DisplayName Spanish:	Valores ‚àÜE del espacio de color Lab

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputImage2: Image2

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.135.2 Methods

4.135.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.135.4 Properties

4.135.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lab ,àÜE attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.135.6 AttributeinputImage2 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lab ,àÜE attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage2
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName:	Image2
DefaultNumber:	0
IdentityNumber:	0

4.135.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.135.8   inputImage2 as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image2
Notes:

Name:	inputImage2
Class:	CIImageMBS (CIImage)
DisplayName English:	Image2
DisplayName German:	Image2
DisplayName French:	Image2
DisplayName Italian:	Image2
DisplayName Spanish:	Image2
Type:	CIAttributeTypeImage

See AttributeinputImage2 for more details.

(Read and Write property)

4.136   class CIFilterLanczosScaleTransformMBS

4.136.1   class CIFilterLanczosScaleTransformMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Lanczos Scale Transform filter.
Notes: Details for this filter:

FilterName:	CILanczosScaleTransform
DisplayName English:	Lanczos Scale Transform
DisplayName German:	Lanczos Skalierungstransformation
DisplayName French:	Transformation d‚Äô√©chelle de Lanczos
DisplayName Italian:	Trasforma scala di Lanczos
DisplayName Spanish:	Transformar mediante escala Lanczos

Categories:

- CICategoryGeometryAdjustment: Geometry Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputScale: Scale

- inputAspectRatio: Aspect Ratio

Output:

- outputImage

- outputImageNewScaleX:scaleY:

- outputImageOldScaleX:scaleY:

Subclass of the CIFilterMBS class.

4.136.2 Methods

4.136.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.136.4 Properties

4.136.5 AttributeinputAspectRatio as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lanczos Scale Transform attribute.
Notes: This attribute should have this content:

Name:	inputAspectRatio
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Aspect Ratio
DisplayName German:	Seitenverh√§ltnis
DisplayName French:	Proportions
DisplayName Italian:	Proporzioni
DisplayName Spanish:	Proporciones
DefaultNumber:	1
IdentityNumber:	1
SliderMaxNumber:	2
SliderMinNumber:	0.5

(Read only property)

4.136.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lanczos Scale Transform attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.136.7   AttributeinputScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lanczos Scale Transform attribute.
Notes: This attribute should have this content:

Name:	inputScale
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
DefaultNumber:	1
IdentityNumber:	1
SliderMaxNumber:	1.5
SliderMinNumber:	0.05

(Read only property)

4.136.8   inputAspectRatio as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Aspect Ratio
Notes:

See AttributeinputAspectRatio for more details.
(Read and Write property)

Name:	inputAspectRatio
Class:	double (NSNumber)
DisplayName English:	Aspect Ratio
DisplayName German:	Seitenverh√§ltnis
DisplayName French:	Proportions
DisplayName Italian:	Proporzioni
DisplayName Spanish:	Proporciones
Type:	CIAttributeTypeScalar

4.136.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.136.10   inputScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale
Notes:

Name:	inputScale
Class:	double (NSNumber)
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
Type:	CIAttributeTypeScalar

See AttributeinputScale for more details.
(Read and Write property)

4.137 class CIFilterLenticularHaloGeneratorMBS

4.137.1 class CIFilterLenticularHaloGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Lenticular Halo filter.
Notes: Details for this filter:

FilterName:	CILenticularHaloGenerator
DisplayName English:	Lenticular Halo
DisplayName German:	Linsenf√rmiges Halo
DisplayName French:	Halo lenticulaire
DisplayName Italian:	Alone lenticolare
DisplayName Spanish:	Halo lenticular

Categories:

- CICategoryGenerator: Generator

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputCenter: Center

- inputColor: Color

- inputHaloRadius: Halo Radius

- inputHaloWidth: Halo Width

- inputHaloOverlap: Halo Overlap

- inputStriationStrength: Striation Strength

- inputStriationContrast: Striation Contrast

- inputTime: Time

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.137.2   Methods

4.137.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.137.4   Properties

4.137.5   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lenticular Halo attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.137.6 AttributeinputColor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lenticular Halo attribute.
Notes: This attribute should have this content:

Name:	inputColor
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
DefaultColor:	Red = 1, Green = 0.9, Blue = 0.8, Alpha = 1
IdentityNumber:	0

(Read only property)

4.137.7 AttributeinputHaloOverlap as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lenticular Halo attribute.
Notes: This attribute should have this content:

Name:	inputHaloOverlap
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Halo Overlap
DisplayName German:	Halo √°berlappen
DisplayName French:	Superposition de halo
DisplayName Italian:	Sovrapposizione alone
DisplayName Spanish:	Superposici√n del halo
DefaultNumber:	0.77
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.137.8   AttributeinputHaloRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lenticular Halo attribute.
Notes: This attribute should have this content:

Name:	inputHaloRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Halo Radius
DisplayName German:	Radius des Halo
DisplayName French:	Rayon du halo
DisplayName Italian:	Raggio alone
DisplayName Spanish:	Radio del halo
DefaultNumber:	70
IdentityNumber:	0
SliderMaxNumber:	1000
SliderMinNumber:	0

(Read only property)

4.137.9   AttributeinputHaloWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lenticular Halo attribute.
Notes: This attribute should have this content:

Name:	inputHaloWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Halo Width
DisplayName German:	Breite des Halo
DisplayName French:	Largeur du halo
DisplayName Italian:	Larghezza alone
DisplayName Spanish:	Anchura del halo
DefaultNumber:	87
IdentityNumber:	0
SliderMaxNumber:	300
SliderMinNumber:	0

(Read only property)

4.137.10   AttributeinputStriationContrast as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lenticular Halo attribute.
Notes: This attribute should have this content:

Name:	inputStriationContrast
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Striation Contrast
DisplayName German:	Kontrast f√ºr Riffelung
DisplayName French:	Contraste des stries
DisplayName Italian:	Contrasto striatura
DisplayName Spanish:	Contraste de la estriaci√n
DefaultNumber:	1
IdentityNumber:	0
SliderMaxNumber:	5
SliderMinNumber:	0

(Read only property)

4.137.11   AttributeinputStriationStrength as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lenticular Halo attribute.
Notes: This attribute should have this content:

(Read only property)

4.137.12   AttributeinputTime as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lenticular Halo attribute.
Notes: This attribute should have this content:

Name:	inputStriationStrength
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Striation Strength
DisplayName German:	St√§rke der Riffelung
DisplayName French:	Force des stries
DisplayName Italian:	Livello striatura
DisplayName Spanish:	Intensidad de la estriaci√n
DefaultNumber:	0.5
IdentityNumber:	0
SliderMaxNumber:	3
SliderMinNumber:	0

Name:	inputTime
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.137.13   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

```
Name:                  inputCenter
Class:                 CIVectorMBS (CIVector)
DisplayName English:   Center
DisplayName German:    Mitte
DisplayName French:    Centre
DisplayName Italian:   Centro
DisplayName Spanish:   Centro
Type:                  CIAttributeTypePosition
```

4.137.14   inputColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color
Notes:

```
Name:                  inputColor
Class:                 CIColorMBS (CIColor)
DisplayName English:   Color
DisplayName German:    Farbe
DisplayName French:    Couleur
DisplayName Italian:   Colore
DisplayName Spanish:   Color
Type:                  CIAttributeTypeColor
```

See AttributeinputColor for more details.
(Read and Write property)

4.137.15   inputHaloOverlap as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Halo Overlap
Notes:

```
Name:                  inputHaloOverlap
Class:                 double (NSNumber)
DisplayName English:   Halo Overlap
DisplayName German:    Halo √oberlappen
DisplayName French:    Superposition de halo
DisplayName Italian:   Sovrapposizione alone
DisplayName Spanish:   Superposici√n del halo
Type:                  CIAttributeTypeScalar
```

See AttributeinputHaloOverlap for more details.
(Read and Write property)

4.137.16   inputHaloRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Halo Radius
Notes:

Name:	inputHaloRadius
Class:	double (NSNumber)
DisplayName English:	Halo Radius
DisplayName German:	Radius des Halo
DisplayName French:	Rayon du halo
DisplayName Italian:	Raggio alone
DisplayName Spanish:	Radio del halo
Type:	CIAttributeTypeDistance

See AttributeinputHaloRadius for more details.
(Read and Write property)

4.137.17   inputHaloWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Halo Width
Notes:

Name:	inputHaloWidth
Class:	double (NSNumber)
DisplayName English:	Halo Width
DisplayName German:	Breite des Halo
DisplayName French:	Largeur du halo
DisplayName Italian:	Larghezza alone
DisplayName Spanish:	Anchura del halo
Type:	CIAttributeTypeDistance

See AttributeinputHaloWidth for more details.
(Read and Write property)

4.137.18 inputStriationContrast as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Striation Contrast
Notes:

Name:	inputStriationContrast
Class:	double (NSNumber)
DisplayName English:	Striation Contrast
DisplayName German:	Kontrast f√ºr Riffelung
DisplayName French:	Contraste des stries
DisplayName Italian:	Contrasto striatura
DisplayName Spanish:	Contraste de la estriaci√n
Type:	CIAttributeTypeScalar

See AttributeinputStriationContrast for more details.
(Read and Write property)

4.137.19 inputStriationStrength as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Striation Strength
Notes:

Name:	inputStriationStrength
Class:	double (NSNumber)
DisplayName English:	Striation Strength
DisplayName German:	St√§rke der Riffelung
DisplayName French:	Force des stries
DisplayName Italian:	Livello striatura
DisplayName Spanish:	Intensidad de la estriaci√n
Type:	CIAttributeTypeScalar

See AttributeinputStriationStrength for more details.
(Read and Write property)

4.137.20 inputTime as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Time
Notes:

Name:	inputTime
Class:	double (NSNumber)
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
Type:	CIAttributeTypeScalar

See AttributeinputTime for more details.
(Read and Write property)

4.138   class CIFilterLightenBlendModeMBS

4.138.1   class CIFilterLightenBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Lighten Blend Mode filter.
Notes: Details for this filter:

FilterName:	CILightenBlendMode
DisplayName English:	Lighten Blend Mode
DisplayName German:	Mischmethode ‚ÄûAufhellen‚Äú
DisplayName French:	Mode de fusion √âclaircir
DisplayName Italian:	Modalit√† sfumatura chiara
DisplayName Spanish:	Aclarar modo de mezcla

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.138.2 Methods

4.138.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.138.4 Properties

4.138.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lighten Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.138.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Lighten Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.138.7 inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.138.8 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.139 class CIFilterLightTunnelMBS

4.139.1 class CIFilterLightTunnelMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Light Tunnel Distortion filter.
Notes: Details for this filter:

FilterName:	CILightTunnel
DisplayName English:	Light Tunnel Distortion
DisplayName German:	Lichttunnelverzerrung
DisplayName French:	D√©formation du tunnel lumineux
DisplayName Italian:	Distorsione tunnel di luce
DisplayName Spanish:	Distorsi√n del t√nel de luz

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputRotation: Rotation

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.139.2   Methods

4.139.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.139.4   Properties

4.139.5   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Light Tunnel Distortion attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.139.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Light Tunnel Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.139.7 AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Light Tunnel Distortion attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	100
IdentityNumber:	0
SliderMaxNumber:	500
SliderMinNumber:	1

(Read only property)

4.139.8 AttributeinputRotation as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Light Tunnel Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRotation
Class:	double
Type:	CIAttributeTypeAngle
DisplayName:	Rotation
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	1.570796
SliderMinNumber:	0

4.139.9   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.139.10   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

4.139.11   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.139.12   inputRotation as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Rotation
Notes:

Name:	inputRotation
Class:	double (NSNumber)
DisplayName English:	Rotation
DisplayName German:	Rotation
DisplayName French:	Rotation
DisplayName Italian:	Rotation
DisplayName Spanish:	Rotation
Type:	CIAttributeTypeAngle

See AttributeinputRotation for more details.
(Read and Write property)

4.140 class CIFilterLinearBurnBlendModeMBS

4.140.1 class CIFilterLinearBurnBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Linear Burn Blend Mode filter.
Notes: Details for this filter:

FilterName:	CILinearBurnBlendMode
DisplayName English:	Linear Burn Blend Mode
DisplayName German:	Mischmethode ‚ÄûLinear nachbelichten‚Äú
DisplayName French:	Mode de fusion √âclaircissement lin√©aire
DisplayName Italian:	Modalit√† sfumatura bruciata lineare
DisplayName Spanish:	Modo de mezcla por sobreexposici√≥n lineal

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.140.2 Methods

4.140.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.140.4 Properties

4.140.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Linear Burn Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.140.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Linear Burn Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.140.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.140.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.141   class CIFilterLinearDodgeBlendModeMBS

4.141.1   class CIFilterLinearDodgeBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Linear Dodge Blend Mode filter.
Notes: Details for this filter:

FilterName:	CILinearDodgeBlendMode
DisplayName English:	Linear Dodge Blend Mode
DisplayName German:	Mischmethode ‚ÄûLinear abwedeln‚Äú
DisplayName French:	Mode de fusion Assombrissement lin√©aire
DisplayName Italian:	Modalit√† sfumatura schermata lineare
DisplayName Spanish:	Modo de mezcla por evasi√n lineal

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.141.2   Methods

4.141.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.141.4   Properties

4.141.5   AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Linear Dodge Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.141.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Linear Dodge Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.141.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.141.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.142   class CIFilterLinearGradientMBS

4.142.1   class CIFilterLinearGradientMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Linear Gradient filter.
Example:

```
// create gradient
dim vektor1 as CIVectorMBS = CIVectorMBS.vectorWithXY(800,600)
dim vektor2 as CIVectorMBS = CIVectorMBS.vectorWithXY(0,0)

dim CiGradiantFilter as new CIFilterLinearGradientMBS
CiGradiantFilter.SetDefaults
CiGradiantFilter.inputPoint0 = vektor1
CiGradiantFilter.inputPoint1 = vektor2
CiGradiantFilter.inputColor0 = CIColorMBS.colorWithRGB(1,1,1)
CiGradiantFilter.inputColor1 = CIColorMBS.colorWithRGB(1,0.5,0.3)

dim r as CIImageMBS = CiGradiantFilter.outputImage

Backdrop = r.RenderPicture(800, 600)
```

Notes: Details for this filter:

FilterName:	CILinearGradient
DisplayName English:	Linear Gradient
DisplayName German:	Linearer Verlauf
DisplayName French:	D√©grad√© lin√©aire
DisplayName Italian:	Gradiente lineare
DisplayName Spanish:	Degradado lineal

Categories:

- CICategoryGradient: Gradient

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputPoint0: Point 0

- inputPoint1: Point 1

- inputColor0: Color 1

- inputColor1: Color 2

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- Tip of day: Gradients with CoreImage Filter

4.142.2   Methods

4.142.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.142.4   Properties

4.142.5   AttributeinputColor0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Linear Gradient attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputColor0
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color 1
DisplayName German:	Farbe 1
DisplayName French:	Couleur 1
DisplayName Italian:	Colore 1
DisplayName Spanish:	Color 1
DefaultColor:	Red = 1, Green = 1, Blue = 1, Alpha = 1
IdentityNumber:	0

4.142.6   AttributeinputColor1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Linear Gradient attribute.
Notes: This attribute should have this content:

Name:	inputColor1
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color 2
DisplayName German:	Farbe 2
DisplayName French:	Couleur 2
DisplayName Italian:	Colore 2
DisplayName Spanish:	Color 2
DefaultColor:	Red = 0, Green = 0, Blue = 0, Alpha = 1
IdentityNumber:	0

(Read only property)

4.142.7   AttributeinputPoint0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Linear Gradient attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputPoint0
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Point 0
DisplayName German:	Punkt 0
DisplayName French:	Point¬†0
DisplayName Italian:	Punto 0
DisplayName Spanish:	Punto 0
DefaultVector:	[0 0]
IdentityVector:	n/a

4.142.8   AttributeinputPoint1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Linear Gradient attribute.
Notes: This attribute should have this content:

Name:	inputPoint1
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Point 1
DisplayName German:	Punkt 1
DisplayName French:	Point 1
DisplayName Italian:	Punto 1
DisplayName Spanish:	Punto 1
DefaultVector:	[200 200]
IdentityVector:	n/a

(Read only property)

4.142.9   inputColor0 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color 1
Notes:

See AttributeinputColor0 for more details.
(Read and Write property)

Name:	inputColor0
Class:	CIColorMBS (CIColor)
DisplayName English:	Color 1
DisplayName German:	Farbe 1
DisplayName French:	Couleur 1
DisplayName Italian:	Colore 1
DisplayName Spanish:	Color 1
Type:	CIAttributeTypeColor

4.142.10   inputColor1 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color 2
Notes:

Name:	inputColor1
Class:	CIColorMBS (CIColor)
DisplayName English:	Color 2
DisplayName German:	Farbe 2
DisplayName French:	Couleur 2
DisplayName Italian:	Colore 2
DisplayName Spanish:	Color 2
Type:	CIAttributeTypeColor

See AttributeinputColor1 for more details.
(Read and Write property)

4.142.11   inputPoint0 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Point 0
Notes:

Name:	inputPoint0
Class:	CIVectorMBS (CIVector)
DisplayName English:	Point 0
DisplayName German:	Punkt 0
DisplayName French:	Point¬†0
DisplayName Italian:	Punto 0
DisplayName Spanish:	Punto 0
Type:	CIAttributeTypePosition

See AttributeinputPoint0 for more details.
(Read and Write property)

4.142.12 inputPoint1 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Point 1
Notes:

Name:	inputPoint1
Class:	CIVectorMBS (CIVector)
DisplayName English:	Point 1
DisplayName German:	Punkt 1
DisplayName French:	Point 1
DisplayName Italian:	Punto 1
DisplayName Spanish:	Punto 1
Type:	CIAttributeTypePosition

See AttributeinputPoint1 for more details.
(Read and Write property)

4.143   class CIFilterLinearLightBlendModeMBS

4.143.1   class CIFilterLinearLightBlendModeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Linear Light Blend Mode filter.
Notes: Details for this filter:

FilterName:	CILinearLightBlendMode
DisplayName English:	Linear Light Blend Mode
DisplayName German:	Mischmethode ‚ÄûLineares Licht‚Äú
DisplayName French:	Mode de fusion Lumi√®re lin√©aire
DisplayName Italian:	Modalit√† sfumatura luce lineare
DisplayName Spanish:	Modo de mezcla por luz lineal

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- [MBS Xojo Plugins, version 23.0pr5](#)

4.143.2 Methods

4.143.3 Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.143.4 Properties

4.143.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Linear Light Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.143.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Linear Light Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.143.7   inputBackgroundImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.143.8   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name: inputImage
 Class: CIImageMBS (CIImage)
DisplayName English: Image
DisplayName German: Bild
DisplayName French: Image
DisplayName Italian: Immagine
DisplayName Spanish: Imagen
Type: CIAttributeTypeImage

4.144   class CIFilterLinearToSRGBToneCurveMBS

4.144.1   class CIFilterLinearToSRGBToneCurveMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Linear to sRGB Tone Curve filter.
Notes: Details for this filter:

FilterName:	CILinearToSRGBToneCurve
DisplayName English:	Linear to sRGB Tone Curve
DisplayName German:	Lineare Farbtonkurve in eine sRGB-Farbtonkurve
DisplayName French:	Lin√©aire vers courbe tonale sRGB
DisplayName Italian:	Da lineare a curva tonale sRGB
DisplayName Spanish:	Curva tonal de lineal a sRGB

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.144.2 Methods

4.144.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.144.4 Properties

4.144.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Linear to sRGB Tone Curve attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.144.6 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.145 class CIFilterLineOverlayMBS

4.145.1 class CIFilterLineOverlayMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Line Overlay filter.
Notes: Details for this filter:

FilterName:	CILineOverlay
DisplayName English:	Line Overlay
DisplayName German:	Linien√°berlagerung
DisplayName French:	Incrustation de lignes
DisplayName Italian:	Sovrapposizione linea
DisplayName Spanish:	L√nea superpuesta

Categories:

- CICategoryBuiltIn: Built-In

- CICategoryStillImage: Still Image

- CICategoryVideo: Video

- CICategoryStylize: Stylize

Input:

- inputImage: Image

- inputNRNoiseLevel: NR Noise Level

- inputNRSharpness: NR Sharpness

- inputEdgeIntensity: Edge Intensity

- inputThreshold: Threshold

- inputContrast: Contrast

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.145.2   Methods

4.145.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.145.4   Properties

4.145.5   AttributeinputContrast as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Line Overlay attribute.
Notes: This attribute should have this content:

Name:	inputContrast
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Contrast
DisplayName German:	Kontrast
DisplayName French:	Contraste
DisplayName Italian:	Contrasto
DisplayName Spanish:	Contraste
DefaultNumber:	50
IdentityNumber:	1
MaxNumber:	0
MinNumber:	0.25
SliderMaxNumber:	200
SliderMinNumber:	0.25

(Read only property)

4.145.6   AttributeinputEdgeIntensity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Line Overlay attribute.
Notes: This attribute should have this content:

Name:	inputEdgeIntensity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Edge Intensity
DisplayName German:	Edge Intensity
DisplayName French:	Intensit√© des contours
DisplayName Italian:	Intensit√† margini
DisplayName Spanish:	Intensidad del borde
DefaultNumber:	1
IdentityNumber:	0
SliderMaxNumber:	200
SliderMinNumber:	0

(Read only property)

4.145.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Line Overlay attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.145.8   AttributeinputNRNoiseLevel as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Line Overlay attribute.
Notes: This attribute should have this content:

Name:	inputNRNoiseLevel
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	NR Noise Level
DisplayName German:	NR Rauschpegel
DisplayName French:	Niveau de bruit NR
DisplayName Italian:	Livello disturbo NS
DisplayName Spanish:	Nivel de ruido NR
DefaultNumber:	0.07
IdentityNumber:	0
SliderMaxNumber:	0.1
SliderMinNumber:	0

(Read only property)

4.145.9   AttributeinputNRSharpness as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Line Overlay attribute.
Notes: This attribute should have this content:

Name:	inputNRSharpness
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	NR Sharpness
DisplayName German:	NR Sch√§rfe
DisplayName French:	Nettet√© NR
DisplayName Italian:	Nitidezza NR
DisplayName Spanish:	Nitidez NR
DefaultNumber:	0.71
IdentityNumber:	0
SliderMaxNumber:	2
SliderMinNumber:	0

(Read only property)

4.145.10   AttributeinputThreshold as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Line Overlay attribute.
Notes: This attribute should have this content:

Name:	inputThreshold
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Threshold
DisplayName German:	Schwellenwert
DisplayName French:	Seuil
DisplayName Italian:	Soglia
DisplayName Spanish:	Umbral
DefaultNumber:	0.1
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.145.11 inputContrast as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Contrast
Notes:

Name:	inputContrast
Class:	double (NSNumber)
DisplayName English:	Contrast
DisplayName German:	Kontrast
DisplayName French:	Contraste
DisplayName Italian:	Contrasto
DisplayName Spanish:	Contraste
Type:	CIAttributeTypeScalar

See AttributeinputContrast for more details.
(Read and Write property)

4.145.12 inputEdgeIntensity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Edge Intensity
Notes:

Name:	inputEdgeIntensity
Class:	double (NSNumber)
DisplayName English:	Edge Intensity
DisplayName German:	Edge Intensity
DisplayName French:	Intensit√© des contours
DisplayName Italian:	Intensit√† margini
DisplayName Spanish:	Intensidad del borde
Type:	CIAttributeTypeScalar

See AttributeinputEdgeIntensity for more details.
(Read and Write property)

4.145.13   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.145.14   inputNRNoiseLevel as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute NR Noise Level
Notes:

See AttributeinputNRNoiseLevel for more details.
(Read and Write property)

Name:	inputNRNoiseLevel
Class:	double (NSNumber)
DisplayName English:	NR Noise Level
DisplayName German:	NR Rauschpegel
DisplayName French:	Niveau de bruit NR
DisplayName Italian:	Livello disturbo NS
DisplayName Spanish:	Nivel de ruido NR
Type:	CIAttributeTypeScalar

4.145.15 inputNRSharpness as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute NR Sharpness
Notes:

Name:	inputNRSharpness
Class:	double (NSNumber)
DisplayName English:	NR Sharpness
DisplayName German:	NR Sch√§rfe
DisplayName French:	Nettet√© NR
DisplayName Italian:	Nitidezza NR
DisplayName Spanish:	Nitidez NR
Type:	CIAttributeTypeScalar

See AttributeinputNRSharpness for more details.
(Read and Write property)

4.145.16 inputThreshold as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Threshold
Notes:

Name:	inputThreshold
Class:	double (NSNumber)
DisplayName English:	Threshold
DisplayName German:	Schwellenwert
DisplayName French:	Seuil
DisplayName Italian:	Soglia
DisplayName Spanish:	Umbral
Type:	CIAttributeTypeScalar

See AttributeinputThreshold for more details.
(Read and Write property)

4.146 class CIFilterLineScreenMBS

4.146.1 class CIFilterLineScreenMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Line Screen filter.
Notes: Details for this filter:

FilterName:	CILineScreen
DisplayName English:	Line Screen
DisplayName German:	Liniertes Halbtonraster
DisplayName French:	√âcran √† traits
DisplayName Italian:	Schermo lineare
DisplayName Spanish:	Pantalla de l√neas

Categories:

- CICategoryHalftoneEffect: Halftone Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputCenter: Center

- inputAngle: Angle

- inputWidth: Width

- inputSharpness: Sharpness

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.146.2   Methods

4.146.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.146.4   Properties

4.146.5   AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Line Screen attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.146.6   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Line Screen attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.146.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Line Screen attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.146.8   AttributeinputSharpness as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Line Screen attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputSharpness
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
DefaultNumber:	0.7
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.146.9   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Line Screen attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	6
IdentityNumber:	0
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	50
SliderMinNumber:	2

(Read only property)

4.146.10   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.146.11   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.146.12   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.146.13   inputSharpness as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Sharpness
Notes:

Name:	inputSharpness
Class:	double (NSNumber)
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
Type:	CIAttributeTypeScalar

See AttributeinputSharpness for more details.
(Read and Write property)

4.146.14   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.147   class CIFilterLuminosityBlendModeMBS

4.147.1   class CIFilterLuminosityBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Luminosity Blend Mode filter.
Notes: Details for this filter:

FilterName:	CILuminosityBlendMode
DisplayName English:	Luminosity Blend Mode
DisplayName German:	Mischmethode ‚ÄûLeuchtkraft‚Äú
DisplayName French:	Mode de fusion Luminosit√©
DisplayName Italian:	Modalit√† sfumatura luminosit√†
DisplayName Spanish:	Modo de mezcla por luminosidad

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.147.2 Methods

4.147.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.147.4 Properties

4.147.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Luminosity Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.147.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Luminosity Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.147.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.147.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.148   class CIFilterMaskedVariableBlurMBS

4.148.1   class CIFilterMaskedVariableBlurMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Masked Variable Blur filter.
Notes: Details for this filter:

FilterName:	CIMaskedVariableBlur
DisplayName English:	Masked Variable Blur
DisplayName German:	Maskierte variable Weichzeichnung
DisplayName French:	Flou variable masqu√©
DisplayName Italian:	Sfocatura variabile mascherata
DisplayName Spanish:	Desenfoque variable con m√°scara

Categories:

- CICategoryBlur: Blur

- CICategoryStillImage: Still Image

- CICategoryVideo: Video

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputMask: Mask

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.148.2 Methods

4.148.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.148.4 Properties

4.148.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Masked Variable Blur attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.148.6 AttributeinputMask as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Masked Variable Blur attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputMask
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName:	Mask
DefaultNumber:	0
IdentityNumber:	0

4.148.7   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Masked Variable Blur attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	5
IdentityNumber:	0
SliderMaxNumber:	10
SliderMinNumber:	0

(Read only property)

4.148.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.148.9   inputMask as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Mask
Notes:

Name:	inputMask
Class:	CIImageMBS (CIImage)
DisplayName English:	Mask
DisplayName German:	Mask
DisplayName French:	Mask
DisplayName Italian:	Mask
DisplayName Spanish:	Mask
Type:	CIAttributeTypeImage

See AttributeinputMask for more details.
(Read and Write property)

4.148.10   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeScalar

See AttributeinputRadius for more details.
(Read and Write property)

4.149 class CIFilterMaskToAlphaMBS

4.149.1 class CIFilterMaskToAlphaMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Mask to Alpha filter.
Notes: Details for this filter:

FilterName:	CIMaskToAlpha
DisplayName English:	Mask to Alpha
DisplayName German:	Mit Alpha-Kanal maskieren
DisplayName French:	Masque vers alpha
DisplayName Italian:	Maschera ad alfa
DisplayName Spanish:	M√°scara a alfa

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.149.2   Methods

4.149.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.149.4   Properties

4.149.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Mask to Alpha attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.149.6   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.150   class CIFilterMaximumComponentMBS

4.150.1   class CIFilterMaximumComponentMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Maximum Component filter.
Notes: Details for this filter:

FilterName:	CIMaximumComponent
DisplayName English:	Maximum Component
DisplayName German:	Maximaler Kanal
DisplayName French:	Composante maximum
DisplayName Italian:	Componente massimo
DisplayName Spanish:	Componente m√°ximo

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.150.2 Methods

4.150.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.150.4 Properties

4.150.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Maximum Component attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.150.6 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.151   class CIFilterMaximumCompositingMBS

4.151.1   class CIFilterMaximumCompositingMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Maximum filter.
Notes: Details for this filter:

FilterName:	CIMaximumCompositing
DisplayName English:	Maximum
DisplayName German:	Maximum
DisplayName French:	Maximum
DisplayName Italian:	Massima
DisplayName Spanish:	M√°ximo

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.151.2   Methods

4.151.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.151.4   Properties

4.151.5   AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Maximum attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.151.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Maximum attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.151.7 inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.151.8 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.152 class CIFilterMBS

4.152.1 class CIFilterMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: CIFilter are filter objects for CoreImage that encapsulate the filter with its attributes.
Notes: Mac OS X 10.4 only.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

- Load RAW image on MacOS with options

- MBS Real Studio Plugins, version 13.1pr5

- Beware of the plugin limit in Real Studio

- MBS Real Studio Plugins, version 12.1pr5

- MBS REALbasic Plugins Version 10.4 release notes

- MBS REALbasic Plugins, version 10.4pr3

Xojo Developer Magazine

- 21.1, page 9: News

4.152.2 Methods

4.152.3 attributesDictionary as dictionary

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Returns a dictionary of key-value pairs that describe the filter.
Example:

dim d as new CIFilterComicEffectMBS
dim a as Dictionary = d.attributesDictionary

break // see values in debugger

Notes: Returns a dictionary that contains a key for each input and output parameter for the filter. Each key is a dictionary that contains all the attributes of an input or output parameter.

4.152.4   AttributesItem(index as Integer) as CIAttributeMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Returns the attribute with the given index.
Notes: Index is zero based.
Nil on any error.
See also:

4.152.5   AttributesItem(name as string) as CIAttributeMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Returns the attribute with the given name.
Notes: nil on error.
See also:

4.152.6   AttributesName(index as Integer) as string

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The name of the attribute with the given index.

4.152.7   Categories as string()

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Array of filter category names.
Notes: nil on any error.

4.152.8   Constructor(Handle as Integer)

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: Initializes object with given object reference.
Notes: ref should be a CIFilter* and the object is retained.
Raises UnsupportedOperationException if object is not a CIFilter.

4.152.9 copy as CIFilterMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Creates a copy of the filter.

4.152.10 filterArrayFromSerializedXMP(xmpData as MemoryBlock, extent as CGRectMBS, byref NSError as Variant) as CIFilterMBS()

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: Returns an array of filter objects de-serialized from XMP data.
Notes: xmpData: The XMP data created previously by calling serializedXMPFromFilters.
extent: The extent of the image from which the XMP data was extracted.
e: The address of an variant for receiving errors, otherwise nil. This is a NSErrorMBS.

Available in OS X v10.9 and later.

4.152.11 FilterNamesInCategories(categories() as String) as string()

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Returns an array containing all published filter names that belong to all listed categories.
Notes: categories: string array with the constants kCICategory*.
Returns nil on any error.

4.152.12 FilterNamesInCategory(category as String) as string()

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Returns an array containing all published filter names in a category.
Example:

```
// load list of filters into Listbox

dim a() as string
dim cf as CIFilterMBS

// get all image categories
a=ciFilterMBS.FilterNamesInCategory(CIFilterMBS.kCICategoryStillImage)

StaticText1.text=str(UBound(a))+" filters."
```

for each s as string in a

// add to listbox
Listbox1.AddRow s

// load this filter
cf=CIFilterMBS.FilterWithName(s)

// And look into the attributes for the Displayname
if cf<>nil then
Listbox1.cell(Listbox1.LastIndex,1)=cf.DisplayName
end if
next

Notes: nil on any error.

4.152.13 FilterWithHandle(handle as Integer) as CIFilterMBS

Plugin Version: 10.4, Platform: macOS, Targets: All.

Function: Creates a new filter object based on the given handle.
Example:

// some filter
dim x as new CIFilterCropMBS

// create a copy
dim f as CIFilterMBS = CIFilterMBS.FilterWithHandle(x.Handle)

// and show name
MsgBox f.FilterName

Notes: The object is retained.
Returns nil on error.

4.152.14 filterWithImageData(Data as MemoryBlock, options as Dictionary) as CIFilterMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Returns a CIFilter that will in turn return a properly processed CIImage as "outputImage".
Notes: Note that when using this initializer, you should pass in a source type identifier hint (kCGImage-

SourceTypeIdentifierHint) key/value pair in order to help the decoder determine the file type, as otherwise confusion and incorrect results are possible.

4.152.15   filterWithImageFile(File as FolderItem, options as Dictionary) as CIFilterMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Returns a CIFilter that will in turn return a properly processed CIImage as "outputImage".

4.152.16   filterWithImageURL(URL as String, options as Dictionary) as CIFilterMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Returns a CIFilter that will in turn return a properly processed CIImage as "outputImage".

4.152.17   FilterWithName(name as String) as CIFilterMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new filter of type 'name'. All input values will be undefined.
Example:

dim cf as CIFilterMBS
// load this filter
cf=CIFilterMBS.FilterWithName("CIAffineTile")

Notes: Returns filter object for the name if found.
See also:

- 4.152.18 FilterWithName(name as String, options as Dictionary) as CIFilterMBS   881

4.152.18   FilterWithName(name as String, options as Dictionary) as CIFilterMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Creates a new filter of type 'name'.
Notes: The filter's input parameters are set from the dictionary of key-value pairs.
On OSX, any of the filter input parameters not specified in the dictionary will be undefined.
On iOS, any of the filter input parameters not specified in the dictionary will be set to default values.

Available in macOS 10.10 or newer.
See also:

4.152.19   InputKeys as string()

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Returns an array containing the names of all inputs in the filter.

4.152.20   kCIActiveKeys as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Read-only array containing a list of keys that affect the output image.
Depending on the RAW decoder version (kCIInputDecoderVersionKey) and the input image type, some input keys might have no effect.

4.152.21   kCIApplyOptionColorSpace as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the apply options.
Notes: If used, the value of the kCIApplyOptionColorSpace key be must be an RGB CGColorSpaceMBS.
Using this option specifies that the output of the kernel is in this color space.
If not specified, the output of the kernel is in the working color space of the rendering CIContextMBS.

4.152.22   kCIApplyOptionDefinition as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the apply options.

4.152.23   kCIApplyOptionExtent as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the apply options.

4.152.24 kCIApplyOptionUserInfo as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the apply options.

4.152.25 kCIAttributeClass as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Class name of the filter.
Notes: The class name of the filter.

4.152.26 kCIAttributeDefault as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Default value for the slider.
Notes: The default value, specified as a floating-point value, for a filter parameter.

4.152.27 kCIAttributeDescription as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the filter attributes.
Notes: The localized description of the filter. This description should inform the end user what the filter does and be short enough to display in the user interface for the filter. It is not intended to be technically detailed.

4.152.28 kCIAttributeDisplayName as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Display name of this attribute (localized).
Notes: The localized version of the filter name that is displayed in the user interface.

4.152.29 kCIAttributeFilterAvailable_iOS as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the filter attributes.
Notes: The iOS version in which the filter first became available, specified as a string.

4.152.30   kCIAttributeFilterAvailable_Mac as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the filter attributes.
Notes: The OS X version in which the filter first became available, specified as a string.

4.152.31   kCIAttributeFilterCategories as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Array of filter category names (see below)
Notes: An array of filter category keys that specifies all the categories in which the filter is a member.

4.152.32   kCIAttributeFilterDisplayName as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Name of the filter intended for UI display (eg. localized).
Notes: The localized display name of the attribute.

4.152.33   kCIAttributeFilterName as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The constant for the name of the filter.

4.152.34   kCIAttributeIdentity as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The identity value for this attribute.
Notes: If supplied as a value for a parameter, the parameter has no effect on the input image.

4.152.35 kCIAttributeMax as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Maximum value for the attribute.
Notes: The maximum value for a filter parameter, specified as a floating-point value.

4.152.36 kCIAttributeMin as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Minimum value for the attribute.
Notes: The minimum value for a filter parameter, specified as a floating-point value.

4.152.37 kCIAttributeName as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the filter attributes.
Notes: The name of the attribute.

4.152.38 kCIAttributeReferenceDocumentation as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the filter attributes.
Notes: The localized reference documentation for the filter. The reference should provide developers with technical details.

4.152.39 kCIAttributeSliderMax as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Default value for the slider.
Notes: The maximum value, specified as a floating-point value, to use for a slider that controls input values for a filter parameter.

4.152.40 kCIAttributeSliderMin as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Minimum value for the slider.
Notes: The minimum value, specified as a floating-point value, to use for a slider that controls input values for a filter parameter.

4.152.41   kCIAttributeType as string

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Type of the attribute.
Notes: An attribute may have a type which defines what kind this attribute type is.
e.g. a number attribute may be a time or a distance.

4.152.42   kCIAttributeTypeAngle as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the types for numbers.
Notes: An angle.

4.152.43   kCIAttributeTypeBoolean as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the types for numbers.
Notes: A Boolean value.

4.152.44   kCIAttributeTypeColor as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the attribute data types.
Notes: A Core Image color (CIColor object) that specifies red, green, and blue component values.

4.152.45   kCIAttributeTypeCount as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the attribute data types.
Notes: A positive integer value.

4.152.46   kCIAttributeTypeDistance as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the types for numbers.
Notes: A distance.

4.152.47   kCIAttributeTypeGradient as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the types for colors.
Notes: An n-by-1 gradient image used to describe a color ramp.

4.152.48   kCIAttributeTypeImage as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the attribute data types.
Notes: A CIImage object.

4.152.49   kCIAttributeTypeInteger as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the attribute data types.
Notes: An integer value.

4.152.50   kCIAttributeTypeOffset as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the types for 2-element vectors.
Notes: An offset. (A 2-element vector type.)

4.152.51   kCIAttributeTypeOpaqueColor as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the types for colors.
Notes: A Core Image color (CIColor object) that specifies red, green, and blue component values. Use this key for colors with no alpha component. If the key is not present, Core Image assumes color with alpha.

4.152.52   kCIAttributeTypePosition as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the types for 2-element vectors.
Notes: A two-dimensional location in the working coordinate space. (A 2-element vector type.)

4.152.53   kCIAttributeTypePosition3 as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the types for 3-element vectors.
Notes: A three-dimensional location in the working coordinate space. (A 3-element vector type.)

4.152.54   kCIAttributeTypeRectangle as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the types for 4-element vectors.
Notes: A Core Image vector that specifies the x and y values of the rectangle origin, and the width (w) and height (h) of the rectangle. The vector takes the form [x, y, w, h] . (A 4-element vector type.)

4.152.55   kCIAttributeTypeScalar as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the types for numbers.
Notes: A scalar value.

4.152.56   kCIAttributeTypeTime as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the attribute data types.
Notes: A parametric time for transitions, specified as a floating-point value in the range of 0.0 to 1.0.

4.152.57 kCIAttributeTypeTransform as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the attribute data types.
Notes: An CGAffineTransform is associated with attribute.

4.152.58 kCICategoryBlur as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that softens images, decreasing the contrast between the edges in an image. Examples of blur filters are Gaussian blur and zoom blur.

4.152.59 kCICategoryBuiltIn as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter provided by Core Image. This distinguishes built-in filters from plug-in filters.

4.152.60 kCICategoryColorAdjustment as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that changes color values. Color adjustment filters are used to eliminate color casts, adjust hue, and correct brightness and contrast. Color adjustment filters do not perform color management; ColorSync performs color management. You can use Quartz 2D to specify the color space associated with an image.

4.152.61 kCICategoryColorEffect as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that modifies the color of an image to achieve an artistic effect. Examples of color effect filters include filters that change a color image to a sepia image or a monochrome image or that produces such effects as posterizing.

4.152.62   kCICategoryCompositeOperation as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter operates on two image sources, using the color values of one image to operate on the other. Composite filters perform computations such as computing maximum values, minimum values, and multiplying values between input images. You can use compositing filters to add effects to an image, crop an image, and achieve a variety of other effects.

4.152.63   kCICategoryDistortionEffect as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that reshapes an image by altering its geometry to create a 3D effect. Using distortion filters, you can displace portions of an image, apply lens effects, make a bulge in an image, and perform other operation to achieve an artistic effect.

4.152.64   kCICategoryFilterGenerator as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter created by chaining several filters together and then packaged as a CIFilterGenerator object.

4.152.65   kCICategoryGenerator as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that generates a pattern, such as a solid color, a checkerboard, or a star shine. The generated output is typically used as input to another filter.

4.152.66   kCICategoryGeometryAdjustment as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that changes the geometry of an image. Some of these filters are used to warp an image to achieve an artistic effects, but these filters can also be used to correct problems in the source image. For

example, you can apply an affine transform to straighten an image that is rotated with respect to the horizon.

4.152.67 kCICategoryGradient as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that generates a fill whose color varies smoothly. Exactly how color varies depends on the type of gradient—linear, radial, or Gaussian.

4.152.68 kCICategoryHalftoneEffect as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that simulates a variety of halftone screens, to mimic the halftone process used in print media. The output of these filters has the familiar ‚Äúnewspaper‚Äù look of the various dot patterns. Filters are typically named after the pattern created by the virtual halftone screen, such as circular screen or hatched screen.

4.152.69 kCICategoryHighDynamicRange as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that works on high dynamic range pixels.

4.152.70 kCICategoryInterlaced as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that works on interlaced images.

4.152.71 kCICategoryNonSquarePixels as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that works on non-square pixels.

4.152.72 kCICategoryReduction as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that reduces image data. These filters are used to solve image analysis problems.

4.152.73 kCICategorySharpen as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that sharpens images, increasing the contrast between the edges in an image. Examples of sharpen filters are unsharp mask and sharpen luminance.

4.152.74 kCICategoryStillImage as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that works on still images.

4.152.75 kCICategoryStylize as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that makes a photographic image look as if it was painted or sketched. These filters are typically used alone or in combination with other filters to achieve artistic effects.

4.152.76 kCICategoryTileEffect as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that typically applies an effect to an image and then create smaller versions of the image (tiles), which are then laid out to create a pattern that‚Äôs infinite in extent.

4.152.77 kCICategoryTransition as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that provides a bridge between two or more images by applying a motion effect that defines how the pixels of a source image yield to that of the destination image.

4.152.78 kCICategoryVideo as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: One of the categories.
Notes: A filter that works on video images.

4.152.79 kCIInputAllowDraftModeKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Boolean: Setting Draft Mode to true can improve image decoding speed without minimal loss of quality.
The default value is false.

4.152.80 kCIInputAngleKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.81 kCIInputAspectRatioKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.82 kCIInputBackgroundImageKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.83   kCIInputBaselineExposureKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Float: A value controlling the amount of baseline exposure applied to the image.
A value of 0 indicates no baseline exposure, i.e. linear response. Default varies from with camera settings.
Available on macOS 10.12 or newer.

4.152.84   kCIInputBiasKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.85   kCIInputBoostKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Float: A value in the range of 0...1, controlling the amount of boost applied to the image.
A value of 0 indicates no boost, i.e. linear response. Default is 1, full boost.

4.152.86   kCIInputBoostShadowAmountKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Float: The amount to boost the shadow areas of the image. Can be used to lighten details in shadows.
Has no effect if the image used for initialization was not RAW.

4.152.87   kCIInputBrightnessKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.88 kCIInputCenterKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.89 kCIInputColorKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.90 kCIInputColorNoiseReductionAmountKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Double: The amount of color noise reduction applied. Range is 0 to 1.

4.152.91 kCIInputContrastKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.92 kCIInputDecoderVersionKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Version string representing the decoder version to be used. A newly initialized object defaults to the newest available decoder version for the given image type. User can request an alternative, older version in order to maintain compatibility with older releases. Must be one of kCISupportedDecoderVersions (below), otherwise a nil output image will be generated.

4.152.93 kCIInputDepthImageKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the common filter parameter keys.
Notes: Available on macOS 10.13 or newer.

4.152.94   kCIInputDisableGamutMapKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Boolean: Setting DisableGamutMap to true disables gamut mapping.
The default value is false.

4.152.95   kCIInputDisparityImageKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the common filter parameter keys.
Notes: Available on macOS 10.13 or newer.

4.152.96   kCIInputEnableChromaticNoiseTrackingKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Boolean: Determines if progressive chromatic noise tracking (based on ISO and exposure time) should be used. default = true. Has no effect if the image used for initialization was not RAW.

4.152.97   kCIInputEnableSharpeningKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Boolean: Determines if the default sharpening should be on. default = true. Has no effect if the image used for initialization was not RAW.

4.152.98   kCIInputEnableVendorLensCorrectionKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Boolean: Determines if the default vendor lens correction be on. default = true if raw image used

for initialization contains lens distortion parameters.

4.152.99 kCIInputEVKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.100 kCIInputExtentKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.101 kCIInputGradientImageKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.102 kCIInputIgnoreImageOrientationKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Boolean: Normally, an image is loaded in its proper orientation, given the associated metadata gives an indication about the orientation. For special purposes it may be useful to load the image in its physical orientation. The exact meaning of this is dependent on the image in question. The default value is false.

4.152.103   kCIInputImageKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.104   kCIInputImageOrientationKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Integer: Overriding this value allows the user to change the orientation of the image. The valid values are in range 1...8 and follow the EXIF specification. Changing this value makes for instance rotation in 90-degree increments easy. The value is disregarded when the kCIInputIgnoreImageOrientationKey flag is set.

4.152.105   kCIInputIntensityKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.106   kCIInputLinearSpaceFilter as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: CIFilterMBS: CIFilter to be applied to the RAW image while it is in linear space.

4.152.107   kCIInputLuminanceNoiseReductionAmountKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Double: The amount of luminance noise reduction applied. Range is 0 to 1.

4.152.108   kCIInputMaskImageKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.109   kCIInputMoireAmountKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Double: The amount of moire reduction applied. Range is 0 to 1.
Available on macOS 10.13

4.152.110   kCIInputNeutralChromaticityXKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Float: The X value of the chromaticity. You can always query this value and you'll get the current X value for neutral X,Y.

4.152.111   kCIInputNeutralChromaticityYKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Float: The Y value of the chromaticity. You can always query this value and you'll get the current Y value for neutral X,Y.

4.152.112   kCIInputNeutralLocationKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: CIVector: (x, y) location in geometric coordinates of the unrotated output image that should be used as neutral.
You can't query this value - it's undefined for reading.

4.152.113   kCIInputNeutralTemperatureKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Float: The color temperature to be considered neutral. You can always query this value and you'll get the current value for temperature.

4.152.114   kCIInputNeutralTintKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Float: The tint to be considered neutral. You can always query this value and you'll get the current value for tint.

4.152.115   kCIInputNoiseReductionAmountKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Double: The amount of noise reduction applied. Range is 0 to 1.

4.152.116   kCIInputNoiseReductionContrastAmountKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Double: The amount of noise reduction contrast applied. Range is 0 to 1.

4.152.117   kCIInputNoiseReductionDetailAmountKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Double: The amount of noise reduction detail applied. Range is 0 to 1.

4.152.118   kCIInputNoiseReductionSharpnessAmountKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Double: The amount of noise reduction sharpness applied. Range is 0 to 1.

4.152.119   kCIInputRadiusKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.120   kCIInputRefractionKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.121   kCIInputSaturationKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.122   kCIInputScaleFactorKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Float: The desired scale factor at which the image will be eventually drawn. Setting this value can greatly improve the drawing performance. A value of 1 would mean identity, values smaller than 1 will result in a smaller output image. Changing the Scale Factor with enabled Draft Mode may also improve performance.

4.152.123   kCIInputScaleKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.124   kCIInputShadingImageKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.125   kCIInputSharpnessKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.126   kCIInputTargetImageKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.127   kCIInputTimeKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.128   kCIInputTransformKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.129   kCIInputVersionKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.130   kCIInputWeightsKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the common filter parameter keys.

4.152.131 kCIInputWidthKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the input keys.

4.152.132 kCIOutputImageKey as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The key for the output image.

4.152.133 kCIOutputNativeSizeKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: CIVector containing the full native size of the unscaled image. The vector's X value is the width, Y is the height.
This is not affected by changing either kCIInputIgnoreImageOrientationKey or kCIInputImageOrientationKey.

4.152.134 kCISupportedDecoderVersionsKey as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: One of the options for image filter initialization.
Notes: Array of dictionary: Array of all supported decoder versions for the given image type, sorted in increasingly newer order. Each entry is a NSDictionary with a number of key/value pairs. All entries would represent a valid version identifier to be passed in for kCIInputDecoderVersion. This value can be only read; setting this value will raise an exception. Currently, the only defined key is @"version" which has as a value an String uniquely describing a given decoder version. This string may not be suitable for user interface display.

4.152.135 kCIUIParameterSet as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Sets of controls for various user scenarios.
Notes: The set of input parameters to use. The associated value can be kCIUISetBasic, kCIUISetIntermediate, kCIUISetAdvanced, or kCIUISetDevelopment.

4.152.136   kCIUISetAdvanced as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the UI Set constants.
Notes: Controls that are appropriate for an advanced user scenario.

4.152.137   kCIUISetBasic as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the UI Set constants.
Notes: Controls that are appropriate for a basic user scenario, that is, the minimum of settings to control the filter.

4.152.138   kCIUISetDevelopment as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the UI Set constants.
Notes: Controls that should be visible only for development purposes.

4.152.139   kCIUISetIntermediate as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the UI Set constants.
Notes: Controls that are appropriate for an intermediate user scenario.

4.152.140   localizedDescriptionForFilterName(filterName as String) as String

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Returns the localized description of a filter for display in the user interface.
Example:

MsgBox CIFilterMBS.localizedDescriptionForFilterName("CIComicEffect")

Notes: filterName: The filter name.
Returns the localized description of the filter.

Available in OS X v10.5 and later.

4.152.141   LocalizedNameForCategory(name as String) as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The localized name of a category.

4.152.142   LocalizedNameForFilterName(name as String) as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Returns the localized name of a filter.

4.152.143   localizedReferenceDocumentationForFilterName(filterName as String) as String

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Returns the location of the localized reference documentation that describes the filter.
Example:

MsgBox CIFilterMBS.localizedReferenceDocumentationForFilterName("CIComicEffect")

Notes: filterName: The filter name.

Returns an URL that specifies the location of the localized documentation, or "" if the filter does not provide localized reference documentation.

The URL can be a local file or a remote document on a web server. Because filters created prior to OS X v10.5 could return nil, you should be make sure that your code handles this case gracefully.

Available in OS X v10.5 and later.

4.152.144   OutputKeys as string()

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Returns an array containing the names of all outputs in the filter.

4.152.145   serializedXMPFromFilters(filters() as CIFilterMBS, extent as CGRectMBS) as Memoryblock

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: Serializes filter parameters into XMP form that is suitable for embedding in an image.
Notes: filters: The array of filters to serialize. See Discussion for the filters that can be serialized.
extent: The extent of the input image to the filter.

At this time the only filters classes that can be serialized using this method are, CIAffineTransform, CICrop, and the filters returned by the CIImage methods autoAdjustmentFilters and autoAdjustmentFiltersWith-Options. The parameters of other filter classes will not be serialized.

Available in OS X v10.9 and later.

4.152.146   SetDefaults

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Sets all inputs to their default values (where default values are defined, other inputs are left as-is).

4.152.147   Properties

4.152.148   AttributesCount as Integer

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Number of attributes.
Notes: (Read only property)

4.152.149   description as String

Plugin Version: 9.7, Platform: macOS, Targets: All.

Function: Returns the textual description for this filter.
Notes: (Read only property)

4.152.150   DisplayName as string

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Name of the filter intended for UI display (eg. localized)
Example:

dim cf as new CIFilterLuminosityBlendModeMBS
MsgBox cf.DisplayName // shows: "Luminosity Blend Mode"

Notes: (Read only property)

4.152.151   Enabled as Boolean

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Whether filter is enabled for animation.
Notes: The 'enabled' property is used only by CoreAnimation and is animatable.
In Core Animation, a CIFilter only applied to its input when this property is set to true.
(Read and Write property)

4.152.152   FilterName as string

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Name of the filter.
Notes: (Read only property)

4.152.153   Handle as Integer

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: The handle to the internal used CIFilter reference.
Notes: (Read only property)

4.152.154   Name as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The filter name.
Notes: On OSX this property is read-write. This can be useful when using CIFilters with CALayers to construct unique keypaths.
For example, to set an attribute of a filter attached to a layer, a path such as "filters.myExposureFilter.inputEV" could be used.
CALayer animations may also access filter attributes via key-paths.
(Read and Write property)

4.152.155   outputImage as CIImageMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The output image.
Notes: Available directly on OS X 10.10 or newer, but our plugin implements it also for older versions by using valueForKey internally.
(Read only property)

4.152.156   ValueAsAffineTransform(key as string) as NSAffineTransformMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Get or set a value as an affine transform.
Notes: On if attributes classname is NSAffineTransform.
(Read and Write computed property)

4.152.157   ValueAsCIColor(key as string) as CIColorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Get or set a value as a color.
Notes: On if attributes classname is CIColor.
(Read and Write computed property)

4.152.158   ValueAsCIImage(key as string) as CIImageMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Get or set a value as an image.
Notes: On if attributes classname is NSImage.
(Read and Write computed property)

4.152.159   ValueAsCIVector(key as string) as CIVectorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Get or set a value as a vector.
Notes: On if attributes classname is CIVector.
(Read and Write computed property)

4.152.160   ValueAsData(key as string) as memoryblock

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Get or set a value as a memoryblock.
Notes: On if attributes classname is memoryblock.
(Read and Write computed property)

4.152.161   ValueAsNumber(key as string) as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Get or set a value as a double.
Notes: On if attributes classname is number.
(Read and Write computed property)

4.152.162   ValueAsString(key as string) as String

Plugin Version: 11.2, Platform: macOS, Targets: All.

Function: Get or set a value as a string.
Notes: On if attributes classname is NSString.
(Read and Write computed property)

4.153   class CIFilterMedianFilterMBS

4.153.1   class CIFilterMedianFilterMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Median filter.
Notes: Details for this filter:

FilterName:	CIMedianFilter
DisplayName English:	Median
DisplayName German:	Median
DisplayName French:	M√©dian
DisplayName Italian:	Mediana
DisplayName Spanish:	Mediano

Categories:

- CICategoryBlur: Blur

- CICategoryStillImage: Still Image

- CICategoryVideo: Video

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.153.2   Methods

4.153.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.153.4 Properties

4.153.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Median attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.153.6 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.154 class CIFilterMeshGeneratorMBS

4.154.1 class CIFilterMeshGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Mesh Generator filter.
Notes: Details for this filter:

FilterName:	CIMeshGenerator
DisplayName English:	Mesh Generator
DisplayName German:	Gittergenerator
DisplayName French:	G√©n√©rateur de maillage
DisplayName Italian:	Generatore di mesh
DisplayName Spanish:	Generador de mallas

Categories:

- CICategoryGenerator: Generator

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputWidth: Width

- inputColor: Color

- inputMesh: Mesh

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.154.2   Methods

4.154.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.154.4   Properties

4.154.5   AttributeinputColor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Mesh Generator attribute.
Notes: This attribute should have this content:

Name:	inputColor
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
DefaultColor:	Red = 1, Green = 1, Blue = 1, Alpha = 1
IdentityNumber:	0

(Read only property)

4.154.6   AttributeinputMesh as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Mesh Generator attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputMesh
Class:	Variant
DisplayName:	Mesh
DefaultNumber:	0
IdentityNumber:	0

4.154.7 AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Mesh Generator attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	1.5
IdentityNumber:	0
SliderMaxNumber:	10
SliderMinNumber:	1

(Read only property)

4.154.8 inputColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color
Notes:

See AttributeinputColor for more details.
(Read and Write property)

4.154.9 inputMesh as Variant

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputColor
Class:	CIColorMBS (CIColor)
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
Type:	CIAttributeTypeColor

Function: The attribute Mesh
Notes:

Name:	inputMesh
Class:	Variant (NSArray)
DisplayName English:	Mesh
DisplayName German:	Mesh
DisplayName French:	Mesh
DisplayName Italian:	Mesh
DisplayName Spanish:	Mesh

See AttributeinputMesh for more details.
(Read and Write property)

4.154.10   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.155   class CIFilterMinimumComponentMBS

4.155.1   class CIFilterMinimumComponentMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Minimum Component filter.
Notes: Details for this filter:

FilterName:	CIMinimumComponent
DisplayName English:	Minimum Component
DisplayName German:	Minimaler Kanal
DisplayName French:	Composante minimum
DisplayName Italian:	Componente minimo
DisplayName Spanish:	Componente m√nimo

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.155.2   Methods

4.155.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.155.4   Properties

4.155.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Minimum Component attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.155.6   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.156   class CIFilterMinimumCompositingMBS

4.156.1   class CIFilterMinimumCompositingMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Minimum filter.
Notes: Details for this filter:

FilterName:	CIMinimumCompositing
DisplayName English:	Minimum
DisplayName German:	Minimum
DisplayName French:	Minimum
DisplayName Italian:	Minima
DisplayName Spanish:	M√nimo

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.156.2 Methods

4.156.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.156.4 Properties

4.156.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Minimum attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.156.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Minimum attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.156.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.156.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.157   class CIFilterMixMBS

4.157.1   class CIFilterMixMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Mix filter.
Notes: Details for this filter:

FilterName:	CIMix
DisplayName English:	Mix
DisplayName German:	Mix
DisplayName French:	M√©lange
DisplayName Italian:	Mix
DisplayName Spanish:	Mezcla

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

- inputAmount: Amount

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.157.2 Methods

4.157.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.157.4 Properties

4.157.5 AttributeinputAmount as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Mix attribute.
Notes: This attribute should have this content:

Name:	inputAmount
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Amount
DisplayName German:	St√§rke
DisplayName French:	Montant
DisplayName Italian:	Quantit√†
DisplayName Spanish:	Cantidad
DefaultNumber:	1
IdentityNumber:	1
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.157.6 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Mix attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äô arri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

4.157.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Mix attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.157.8   inputAmount as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Amount
Notes:

See AttributeinputAmount for more details.
(Read and Write property)

Name:	inputAmount
Class:	double (NSNumber)
DisplayName English:	Amount
DisplayName German:	St√§rke
DisplayName French:	Montant
DisplayName Italian:	Quantit√†
DisplayName Spanish:	Cantidad
Type:	CIAttributeTypeScalar

4.157.9   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.157.10   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.158 class CIFilterModTransitionMBS

4.158.1 class CIFilterModTransitionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Mod filter.
Notes: Details for this filter:

FilterName:	CIModTransition
DisplayName English:	Mod
DisplayName German:	Mod
DisplayName French:	Mod
DisplayName Italian:	Mod
DisplayName Spanish:	Mod

Categories:

- CICategoryTransition: Transition

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTargetImage: Target Image

- inputCenter: Center

- inputTime: Time

- inputAngle: Angle

- inputRadius: Radius

- inputCompression: Compression

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.158.2   Methods

4.158.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.158.4   Properties

4.158.5   AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Mod attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	2
IdentityNumber:	0
SliderMaxNumber:	6.283185
SliderMinNumber:	-6.283185

(Read only property)

4.158.6   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Mod attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.158.7 AttributeinputCompression as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Mod attribute.
Notes: This attribute should have this content:

Name:	inputCompression
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Compression
DisplayName German:	Komprimierung
DisplayName French:	Compression
DisplayName Italian:	Compressione
DisplayName Spanish:	Compresi√n
DefaultNumber:	300
IdentityNumber:	0
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	800
SliderMinNumber:	100

(Read only property)

4.158.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Mod attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.158.9   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Mod attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	150
IdentityNumber:	0
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	200
SliderMinNumber:	1

(Read only property)

4.158.10   AttributeinputTargetImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Mod attribute.
Notes: This attribute should have this content:

Name:	inputTargetImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.158.11   AttributeinputTime as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Mod attribute.
Notes: This attribute should have this content:

(Read only property)

4.158.12   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

See AttributeinputAngle for more details.
(Read and Write property)

Name:	inputTime
Class:	double
Type:	CIAttributeTypeTime
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

4.158.13   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.158.14   inputCompression as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Compression
Notes:

Name:	inputCompression
Class:	double (NSNumber)
DisplayName English:	Compression
DisplayName German:	Komprimierung
DisplayName French:	Compression
DisplayName Italian:	Compressione
DisplayName Spanish:	Compresi√n
Type:	CIAttributeTypeDistance

See AttributeinputCompression for more details.
(Read and Write property)

4.158.15   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.158.16   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.158.17   inputTargetImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Target Image
Notes:

Name:	inputTargetImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
Type:	CIAttributeTypeImage

See AttributeinputTargetImage for more details.
(Read and Write property)

4.158.18   inputTime as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Time
Notes:

See AttributeinputTime for more details.
(Read and Write property)

Name:	inputTime
Class:	double (NSNumber)
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
Type:	CIAttributeTypeTime

4.159   class CIFilterMorphologyGradientMBS

4.159.1   class CIFilterMorphologyGradientMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Morphology Gradient filter.
Notes: Details for this filter:

FilterName:	CIMorphologyGradient
DisplayName English:	Morphology Gradient
DisplayName German:	Morphologischer Verlauf
DisplayName French:	Gradient morphologique
DisplayName Italian:	Gradiente morfologico
DisplayName Spanish:	Gradiente morfol√gico

Categories:

- CICategoryBlur: Blur

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.159.2 Methods

4.159.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.159.4 Properties

4.159.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Morphology Gradient attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.159.6 AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Morphology Gradient attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	5
IdentityNumber:	0
SliderMaxNumber:	50
SliderMinNumber:	0

4.159.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.159.8   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

4.160   class CIFilterMorphologyMaximumMBS

4.160.1   class CIFilterMorphologyMaximumMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Morphology Maximum filter.
Notes: Details for this filter:

FilterName:	CIMorphologyMaximum
DisplayName English:	Morphology Maximum
DisplayName German:	Morphologisches Maximum
DisplayName French:	Maximum morphologique
DisplayName Italian:	Massimo morfologico
DisplayName Spanish:	M√°ximo morfol√gico

Categories:

- CICategoryBlur: Blur

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.160.2 Methods

4.160.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.160.4 Properties

4.160.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Morphology Maximum attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.160.6 AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Morphology Maximum attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	50
SliderMinNumber:	0

4.160.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.160.8   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

4.161   class CIFilterMorphologyMinimumMBS

4.161.1   class CIFilterMorphologyMinimumMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Morphology Minimum filter.
Notes: Details for this filter:

FilterName:	CIMorphologyMinimum
DisplayName English:	Morphology Minimum
DisplayName German:	Morphologisches Minimum
DisplayName French:	Minimum morphologique
DisplayName Italian:	Minimo morfologico
DisplayName Spanish:	M√nimo morfol√gico

Categories:

- CICategoryBlur: Blur

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.161.2 Methods

4.161.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.161.4 Properties

4.161.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Morphology Minimum attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.161.6 AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Morphology Minimum attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	50
SliderMinNumber:	0

4.161.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.161.8   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

4.162   class CIFilterMorphologyRectangleMaximumMBS

4.162.1   class CIFilterMorphologyRectangleMaximumMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Morphology Rectangle Maximum filter.
Notes: Details for this filter:

FilterName:	CIMorphologyRectangleMaximum
DisplayName English:	Morphology Rectangle Maximum
DisplayName German:	Maximum des Morphologierechtecks
DisplayName French:	Maximum morphologique (rectangulaire)
DisplayName Italian:	Massimo morfologico rettangolare
DisplayName Spanish:	M√°ximo morfol√gico rectangular

Categories:

- CICategoryBlur: Blur

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputWidth: Width

- inputHeight: Height

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.162.2 Methods

4.162.3 Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.162.4 Properties

4.162.5 AttributeinputHeight as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Morphology Rectangle Maximum attribute.
Notes: This attribute should have this content:

Name:	inputHeight
Class:	double
Type:	CIAttributeTypeInteger
DisplayName:	Height
DefaultNumber:	5
IdentityNumber:	1
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	49
SliderMinNumber:	1

(Read only property)

4.162.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Morphology Rectangle Maximum attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.162.7   AttributeinputWidth as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Morphology Rectangle Maximum attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	5
IdentityNumber:	1
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	49
SliderMinNumber:	1

(Read only property)

4.162.8   inputHeight as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Height
Notes:

See AttributeinputHeight for more details.

Name:	inputHeight
Class:	double (NSNumber)
DisplayName English:	Height
DisplayName German:	Height
DisplayName French:	Height
DisplayName Italian:	Height
DisplayName Spanish:	Height
Type:	CIAttributeTypeInteger

(Read and Write property)

4.162.9   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.162.10   inputWidth as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

See AttributeinputWidth for more details.
(Read and Write property)

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeInteger

4.163 class CIFilterMorphologyRectangleMinimumMBS

4.163.1 class CIFilterMorphologyRectangleMinimumMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Morphology Rectangle Minimum filter.
Notes: Details for this filter:

FilterName:	CIMorphologyRectangleMinimum
DisplayName English:	Morphology Rectangle Minimum
DisplayName German:	Minimum des Morphologierechtecks
DisplayName French:	Minimum morphologique (rectangulaire)
DisplayName Italian:	Minimo morfologico rettangolare
DisplayName Spanish:	M√nimo morfol√gico rectangular

Categories:

- CICategoryBlur: Blur

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputWidth: Width

- inputHeight: Height

Output:

- outputImage

Subclass of the CIFilterMBS class.
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4.163.2   Methods

4.163.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.163.4   Properties

4.163.5   AttributeinputHeight as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Morphology Rectangle Minimum attribute.
Notes: This attribute should have this content:

Name:	inputHeight
Class:	double
Type:	CIAttributeTypeInteger
DisplayName:	Height
DefaultNumber:	5
IdentityNumber:	1
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	49
SliderMinNumber:	1

(Read only property)

4.163.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Morphology Rectangle Minimum attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.163.7   AttributeinputWidth as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Morphology Rectangle Minimum attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	5
IdentityNumber:	1
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	49
SliderMinNumber:	1

(Read only property)

4.163.8   inputHeight as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Height
Notes:

See AttributeinputHeight for more details.

Name:	inputHeight
Class:	double (NSNumber)
DisplayName English:	Height
DisplayName German:	Height
DisplayName French:	Height
DisplayName Italian:	Height
DisplayName Spanish:	Height
Type:	CIAttributeTypeInteger

(Read and Write property)

4.163.9   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.163.10   inputWidth as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

See AttributeinputWidth for more details.
(Read and Write property)

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeInteger

4.164   class CIFilterMotionBlurMBS

4.164.1   class CIFilterMotionBlurMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Motion Blur filter.
Notes: Details for this filter:

FilterName:	CIMotionBlur
DisplayName English:	Motion Blur
DisplayName German:	Bewegungsunsch√§rfe
DisplayName French:	Flou mouvement
DisplayName Italian:	Sfumatura movimento
DisplayName Spanish:	Difuminado de movimiento

Categories:

- CICategoryBlur: Blur

- CICategoryStillImage: Still Image

- CICategoryVideo: Video

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputRadius: Radius

- inputAngle: Angle

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.164.2 Methods

4.164.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.164.4 Properties

4.164.5 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Motion Blur attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.164.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Motion Blur attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.164.7   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Motion Blur attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	20
IdentityNumber:	0
SliderMaxNumber:	100
SliderMinNumber:	0

(Read only property)

4.164.8   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

See AttributeinputAngle for more details.
(Read and Write property)

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

4.164.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.164.10   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.165 class CIFilterMultiplyBlendModeMBS

4.165.1 class CIFilterMultiplyBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Multiply Blend Mode filter.
Notes: Details for this filter:

FilterName:	CIMultiplyBlendMode
DisplayName English:	Multiply Blend Mode
DisplayName German:	Mischmethode ‚ÄûMultiplizieren‚Äú
DisplayName French:	Mode de fusion Multiplication
DisplayName Italian:	Modalit√† sfumatura moltiplicata
DisplayName Spanish:	Multiplicar modo de mezcla

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.165.2   Methods

4.165.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.165.4   Properties

4.165.5   AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Multiply Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.165.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Multiply Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.165.7 inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.165.8 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.166 class CIFilterMultiplyCompositingMBS

4.166.1 class CIFilterMultiplyCompositingMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Multiply filter.
Notes: Details for this filter:

FilterName:	CIMultiplyCompositing
DisplayName English:	Multiply
DisplayName German:	Multiplizieren
DisplayName French:	Multiplier
DisplayName Italian:	Moltiplica
DisplayName Spanish:	Multiplicar

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.166.2   Methods

4.166.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.166.4   Properties

4.166.5   AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Multiply attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.166.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Multiply attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.166.7 inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.166.8 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.167   class CIFilterNinePartStretchedMBS

4.167.1   class CIFilterNinePartStretchedMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Nine Part Stretched filter.
Notes: Details for this filter:

FilterName:	CINinePartStretched
DisplayName English:	Nine Part Stretched
DisplayName German:	Neun Teile gedehnt
DisplayName French:	√âtir√© en neuf parties
DisplayName Italian:	Con allungamento in nove parti
DisplayName Spanish:	Estirado en nueve partes

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputBreakpoint0: Breakpoint0

- inputBreakpoint1: Breakpoint1

- inputGrowAmount: Grow Amount

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.167.2   Methods

4.167.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.167.4   Properties

4.167.5   AttributeinputBreakpoint0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Nine Part Stretched attribute.
Notes: This attribute should have this content:

Name:	inputBreakpoint0
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName:	Breakpoint0
DefaultVector:	[50 50]
IdentityVector:	n/a

(Read only property)

4.167.6   AttributeinputBreakpoint1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Nine Part Stretched attribute.
Notes: This attribute should have this content:

(Read only property)

4.167.7   AttributeinputGrowAmount as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputBreakpoint1
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName:	Breakpoint1
DefaultVector:	[150 150]
IdentityVector:	n/a

Function: Details about the Nine Part Stretched attribute.
Notes: This attribute should have this content:

Name:	inputGrowAmount
Class:	CIVectorMBS
Type:	CIAttributeTypeOffset
DisplayName English:	Grow Amount
DisplayName German:	Wachstum
DisplayName French:	Degr√© d‚Äôagrandissement
DisplayName Italian:	Quantit√† di sviluppo
DisplayName Spanish:	Cantidad de crecimiento
DefaultVector:	[100 100]
IdentityVector:	n/a

(Read only property)

4.167.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Nine Part Stretched attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.167.9   inputBreakpoint0 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Breakpoint0
Notes:

Name:	inputBreakpoint0
Class:	CIVectorMBS (CIVector)
DisplayName English:	Breakpoint0
DisplayName German:	Breakpoint0
DisplayName French:	Breakpoint0
DisplayName Italian:	Breakpoint0
DisplayName Spanish:	Breakpoint0
Type:	CIAttributeTypePosition

See AttributeinputBreakpoint0 for more details.
(Read and Write property)

4.167.10   inputBreakpoint1 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Breakpoint1
Notes:

Name:	inputBreakpoint1
Class:	CIVectorMBS (CIVector)
DisplayName English:	Breakpoint1
DisplayName German:	Breakpoint1
DisplayName French:	Breakpoint1
DisplayName Italian:	Breakpoint1
DisplayName Spanish:	Breakpoint1
Type:	CIAttributeTypePosition

See AttributeinputBreakpoint1 for more details.
(Read and Write property)

4.167.11 inputGrowAmount as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Grow Amount
Notes:

Name:	inputGrowAmount
Class:	CIVectorMBS (CIVector)
DisplayName English:	Grow Amount
DisplayName German:	Wachstum
DisplayName French:	Degr√© d‚Äôagrandissement
DisplayName Italian:	Quantit√† di sviluppo
DisplayName Spanish:	Cantidad de crecimiento
Type:	CIAttributeTypeOffset

See AttributeinputGrowAmount for more details.
(Read and Write property)

4.167.12 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.168   class CIFilterNinePartTiledMBS

4.168.1   class CIFilterNinePartTiledMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Nine Part Tiled filter.
Notes: Details for this filter:

FilterName:	CINinePartTiled
DisplayName English:	Nine Part Tiled
DisplayName German:	Neun Teile gekachelt
DisplayName French:	Mosa√Øque en neuf parties
DisplayName Italian:	Con schema a mosaico in nove parti
DisplayName Spanish:	Mosaico en nueve partes

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputBreakpoint0: Breakpoint0

- inputBreakpoint1: Breakpoint1

- inputGrowAmount: Grow Amount

- inputFlipYTiles: Flip Y Tiles

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.168.2 Methods

4.168.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.168.4 Properties

4.168.5 AttributeinputBreakpoint0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Nine Part Tiled attribute.
Notes: This attribute should have this content:

Name:	inputBreakpoint0
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName:	Breakpoint0
DefaultVector:	[50 50]
IdentityVector:	n/a

(Read only property)

4.168.6 AttributeinputBreakpoint1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Nine Part Tiled attribute.
Notes: This attribute should have this content:

(Read only property)

4.168.7 AttributeinputFlipYTiles as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputBreakpoint1
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName:	Breakpoint1
DefaultVector:	[150 150]
IdentityVector:	n/a

Function: Details about the Nine Part Tiled attribute.
Notes: This attribute should have this content:

Name:	inputFlipYTiles
Class:	double
Type:	CIAttributeTypeBoolean
DisplayName English:	Flip Y Tiles
DisplayName German:	Y-Kacheln spiegeln
DisplayName French:	Retourner les mosa√Øques¬†Y
DisplayName Italian:	Capovolge caselle Y
DisplayName Spanish:	Voltear teselas en Y
DefaultNumber:	1
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0

(Read only property)

4.168.8   AttributeinputGrowAmount as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Nine Part Tiled attribute.
Notes: This attribute should have this content:

(Read only property)

4.168.9   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Nine Part Tiled attribute.
Notes: This attribute should have this content:

Name:	inputGrowAmount
Class:	CIVectorMBS
Type:	CIAttributeTypeOffset
DisplayName English:	Grow Amount
DisplayName German:	Wachstum
DisplayName French:	Degr√© d‚Äôagrandissement
DisplayName Italian:	Quantit√† di sviluppo
DisplayName Spanish:	Cantidad de crecimiento
DefaultVector:	[100 100]
IdentityVector:	n/a

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.168.10   inputBreakpoint0 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Breakpoint0
Notes:

Name:	inputBreakpoint0
Class:	CIVectorMBS (CIVector)
DisplayName English:	Breakpoint0
DisplayName German:	Breakpoint0
DisplayName French:	Breakpoint0
DisplayName Italian:	Breakpoint0
DisplayName Spanish:	Breakpoint0
Type:	CIAttributeTypePosition

See AttributeinputBreakpoint0 for more details.

(Read and Write property)

4.168.11   inputBreakpoint1 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Breakpoint1
Notes:

Name:	inputBreakpoint1
Class:	CIVectorMBS (CIVector)
DisplayName English:	Breakpoint1
DisplayName German:	Breakpoint1
DisplayName French:	Breakpoint1
DisplayName Italian:	Breakpoint1
DisplayName Spanish:	Breakpoint1
Type:	CIAttributeTypePosition

See AttributeinputBreakpoint1 for more details.
(Read and Write property)

4.168.12   inputFlipYTiles as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Flip Y Tiles
Notes:

Name:	inputFlipYTiles
Class:	double (NSNumber)
DisplayName English:	Flip Y Tiles
DisplayName German:	Y-Kacheln spiegeln
DisplayName French:	Retourner les mosa√Øques¬†Y
DisplayName Italian:	Capovolge caselle Y
DisplayName Spanish:	Voltear teselas en Y
Type:	CIAttributeTypeBoolean

See AttributeinputFlipYTiles for more details.
(Read and Write property)

4.168.13 inputGrowAmount as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Grow Amount
Notes:

Name:	inputGrowAmount
Class:	CIVectorMBS (CIVector)
DisplayName English:	Grow Amount
DisplayName German:	Wachstum
DisplayName French:	Degr√© d‚Äôagrandissement
DisplayName Italian:	Quantit√† di sviluppo
DisplayName Spanish:	Cantidad de crecimiento
Type:	CIAttributeTypeOffset

See AttributeinputGrowAmount for more details.
(Read and Write property)

4.168.14 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.169 class CIFilterNoiseReductionMBS

4.169.1 class CIFilterNoiseReductionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Noise Reduction filter.
Notes: Details for this filter:

FilterName:	CINoiseReduction
DisplayName English:	Noise Reduction
DisplayName German:	Rauschunterdr√°ckung
DisplayName French:	R√©duction du bruit
DisplayName Italian:	Riduzione disturbo
DisplayName Spanish:	Reducci√n de ruido

Categories:

- CICategoryBlur: Blur

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputNoiseLevel: Noise Level

- inputSharpness: Sharpness

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.169.2 Methods

4.169.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.169.4 Properties

4.169.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Noise Reduction attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.169.6 AttributeinputNoiseLevel as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Noise Reduction attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputNoiseLevel
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Noise Level
DisplayName German:	Rauschpegel
DisplayName French:	Niveau de bruit
DisplayName Italian:	Livello disturbo
DisplayName Spanish:	Nivel de ruido
DefaultNumber:	0.02
IdentityNumber:	0
SliderMaxNumber:	0.1
SliderMinNumber:	0

4.169.7   AttributeinputSharpness as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Noise Reduction attribute.
Notes: This attribute should have this content:

Name:	inputSharpness
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
DefaultNumber:	0.4
IdentityNumber:	0
SliderMaxNumber:	2
SliderMinNumber:	0

(Read only property)

4.169.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

(Read and Write property)

4.169.9   inputNoiseLevel as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Noise Level
Notes:

Name:	inputNoiseLevel
Class:	double (NSNumber)
DisplayName English:	Noise Level
DisplayName German:	Rauschpegel
DisplayName French:	Niveau de bruit
DisplayName Italian:	Livello disturbo
DisplayName Spanish:	Nivel de ruido
Type:	CIAttributeTypeScalar

See AttributeinputNoiseLevel for more details.
(Read and Write property)

4.169.10   inputSharpness as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Sharpness
Notes:

See AttributeinputSharpness for more details.
(Read and Write property)

Name:	inputSharpness
Class:	double (NSNumber)
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
Type:	CIAttributeTypeScalar

4.170 class CIFilterOpTileMBS

4.170.1 class CIFilterOpTileMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Op Tile filter.
Notes: Details for this filter:

FilterName:	CIOpTile
DisplayName English:	Op Tile
DisplayName German:	Op kacheln
DisplayName French:	Mosa√Øque op√©rationnelle
DisplayName Italian:	Mosaico ottico
DisplayName Spanish:	Mosaico √ptico

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputScale: Scale

- inputAngle: Angle

- inputWidth: Width

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.170.2   Methods

4.170.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.170.4   Properties

4.170.5   AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Op Tile attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.170.6   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Op Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.170.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Op Tile attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.170.8   AttributeinputScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Op Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputScale
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
DefaultNumber:	2.8
IdentityNumber:	1
SliderMaxNumber:	10
SliderMinNumber:	0.1

4.170.9   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Op Tile attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	65
IdentityNumber:	65
SliderMaxNumber:	1000
SliderMinNumber:	1

(Read only property)

4.170.10   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

See AttributeinputAngle for more details.

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

(Read and Write property)

4.170.11 inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.170.12 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.170.13   inputScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale
Notes:

Name:	inputScale
Class:	double (NSNumber)
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
Type:	CIAttributeTypeScalar

See AttributeinputScale for more details.
(Read and Write property)

4.170.14   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.171   class CIFilterOverlayBlendModeMBS

4.171.1   class CIFilterOverlayBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Overlay Blend Mode filter.
Notes: Details for this filter:

FilterName:	CIOverlayBlendMode
DisplayName English:	Overlay Blend Mode
DisplayName German:	Mischmethode ‚Äû√úberlagerung‚Äú
DisplayName French:	Mode de fusion Superposition
DisplayName Italian:	Modalit√† sfumatura sovrapposizione
DisplayName Spanish:	Superponer modo de mezcla

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.171.2 Methods

4.171.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.171.4 Properties

4.171.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Overlay Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.171.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Overlay Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.171.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.171.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.172   class CIFilterPageCurlTransitionMBS

4.172.1   class CIFilterPageCurlTransitionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Page Curl filter.
Notes: Details for this filter:

FilterName:	CIPageCurlTransition
DisplayName English:	Page Curl
DisplayName German:	Umbl√§ttern
DisplayName French:	Repli de page
DisplayName Italian:	Ricciolo pagina
DisplayName Spanish:	Ondulaci√n de p√°gina

Categories:

- CICategoryTransition: Transition

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTargetImage: Target Image

- inputBacksideImage: Backside Image

- inputShadingImage: Shading Image

- inputExtent: Extent

- inputTime: Time

- inputAngle: Angle

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.172.2 Methods

4.172.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.172.4 Properties

4.172.5 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.172.6   AttributeinputBacksideImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl attribute.
Notes: This attribute should have this content:

Name:	inputBacksideImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Backside Image
DisplayName German:	Bild auf der Hinterseite
DisplayName French:	Image arri√®re
DisplayName Italian:	Immagine posteriore
DisplayName Spanish:	Imagen de reverso
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.172.7   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 300 300]
IdentityVector:	n/a

(Read only property)

4.172.8 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.172.9 AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	100
IdentityNumber:	0
MaxNumber:	0
MinNumber:	0.01
SliderMaxNumber:	400
SliderMinNumber:	0.01

(Read only property)

4.172.10   AttributeinputShadingImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl attribute.
Notes: This attribute should have this content:

Name:	inputShadingImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Shading Image
DisplayName German:	Bild schattieren
DisplayName French:	Image d‚Äôombrage
DisplayName Italian:	Immagine ombreggiatura
DisplayName Spanish:	Imagen de sombra
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.172.11   AttributeinputTargetImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl attribute.
Notes: This attribute should have this content:

Name:	inputTargetImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.172.12 AttributeinputTime as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl attribute.
Notes: This attribute should have this content:

Name:	inputTime
Class:	double
Type:	CIAttributeTypeTime
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.172.13 inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.172.14   inputBacksideImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Backside Image
Notes:

Name:	inputBacksideImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Backside Image
DisplayName German:	Bild auf der Hinterseite
DisplayName French:	Image arri√®re
DisplayName Italian:	Immagine posteriore
DisplayName Spanish:	Imagen de reverso
Type:	CIAttributeTypeImage

See AttributeinputBacksideImage for more details.
(Read and Write property)

4.172.15   inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.172.16   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.172.17   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.172.18   inputShadingImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Shading Image
Notes:

See AttributeinputShadingImage for more details.
(Read and Write property)

Name:	inputShadingImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Shading Image
DisplayName German:	Bild schattieren
DisplayName French:	Image d‚Äôombrage
DisplayName Italian:	Immagine ombreggiatura
DisplayName Spanish:	Imagen de sombra
Type:	CIAttributeTypeImage

4.172.19   inputTargetImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Target Image
Notes:

Name:	inputTargetImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
Type:	CIAttributeTypeImage

See AttributeinputTargetImage for more details.
(Read and Write property)

4.172.20   inputTime as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Time
Notes:

Name:	inputTime
Class:	double (NSNumber)
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
Type:	CIAttributeTypeTime

See AttributeinputTime for more details.
(Read and Write property)

4.173   class CIFilterPageCurlWithShadowTransitionMBS

4.173.1   class CIFilterPageCurlWithShadowTransitionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Page Curl With Shadow filter.
Notes: Details for this filter:

FilterName:	CIPageCurlWithShadowTransition
DisplayName English:	Page Curl With Shadow
DisplayName German:	Umbl√§ttern mit Schatten
DisplayName French:	Repli de page avec ombre
DisplayName Italian:	Piega pagina con ombra
DisplayName Spanish:	P√°gina con el borde ondulado y sombra

Categories:

- CICategoryTransition: Transition

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTargetImage: Target Image

- inputBacksideImage: Backside Image

- inputExtent: Extent

- inputTime: Time

- inputAngle: Angle

- inputRadius: Radius

- inputShadowSize: Shadow Size

- inputShadowAmount: Shadow Amount

- inputShadowExtent: Shadow Extent

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Real Studio Plugins, version 13.1pr5

4.173.2 Methods

4.173.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.173.4 Properties

4.173.5 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl With Shadow attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.173.6   AttributeinputBacksideImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl With Shadow attribute.
Notes: This attribute should have this content:

Name:	inputBacksideImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Backside Image
DisplayName German:	Bild auf der Hinterseite
DisplayName French:	Image arri√®re
DisplayName Italian:	Immagine posteriore
DisplayName Spanish:	Imagen de reverso
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.173.7   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl With Shadow attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 0 0]
IdentityVector:	n/a

(Read only property)

4.173.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl With Shadow attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.173.9   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl With Shadow attribute.
Notes: This attribute should have this content:

(Read only property)

4.173.10   AttributeinputShadowAmount as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl With Shadow attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	100
IdentityNumber:	0
MaxNumber:	0
MinNumber:	0.01
SliderMaxNumber:	400
SliderMinNumber:	0.01

Name:	inputShadowAmount
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Shadow Amount
DisplayName German:	Schattenumfang
DisplayName French:	Quantit√© d‚Äôombre
DisplayName Italian:	Quantit√† ombreggiatura
DisplayName Spanish:	Cantidad de sombreado
DefaultNumber:	0.7
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.173.11   AttributeinputShadowExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl With Shadow attribute.
Notes: This attribute should have this content:

(Read only property)

4.173.12   AttributeinputShadowSize as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputShadowExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Shadow Extent
DisplayName German:	Schattenausdehnung
DisplayName French:	√âtendue de l‚Äôombre
DisplayName Italian:	Estensione ombreggiatura
DisplayName Spanish:	Extensi√n de la sombra
DefaultVector:	[0 0 0 0]
IdentityVector:	n/a

Function: Details about the Page Curl With Shadow attribute.
Notes: This attribute should have this content:

Name:	inputShadowSize
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Shadow Size
DisplayName German:	Schattengr√√üe
DisplayName French:	Taille de l‚Äôombre
DisplayName Italian:	Dimensioni ombreggiatura
DisplayName Spanish:	Tama√±o de la sombra
DefaultNumber:	0.5
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.173.13   AttributeinputTargetImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl With Shadow attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputTargetImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
DefaultNumber:	0
IdentityNumber:	0

4.173.14   AttributeinputTime as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Page Curl With Shadow attribute.
Notes: This attribute should have this content:

Name:	inputTime
Class:	double
Type:	CIAttributeTypeTime
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.173.15   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

See AttributeinputAngle for more details.

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

(Read and Write property)

4.173.16 inputBacksideImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Backside Image
Notes:

Name:	inputBacksideImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Backside Image
DisplayName German:	Bild auf der Hinterseite
DisplayName French:	Image arri√®re
DisplayName Italian:	Immagine posteriore
DisplayName Spanish:	Imagen de reverso
Type:	CIAttributeTypeImage

See AttributeinputBacksideImage for more details.
(Read and Write property)

4.173.17 inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

See AttributeinputExtent for more details.
(Read and Write property)

Name: inputExtent
Class: CIVectorMBS (CIVector)
DisplayName English: Extent
DisplayName German: Betrag
DisplayName French: √âtendue
DisplayName Italian: Ampiezza
DisplayName Spanish: Amplitud
Type: CIAttributeTypeRectangle

4.173.18   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name: inputImage
Class: CIImageMBS (CIImage)
DisplayName English: Image
DisplayName German: Bild
DisplayName French: Image
DisplayName Italian: Immagine
DisplayName Spanish: Imagen
Type: CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.173.19   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name: inputRadius
Class: double (NSNumber)
DisplayName English: Radius
DisplayName German: Radius
DisplayName French: Rayon
DisplayName Italian: Raggio
DisplayName Spanish: Radio
Type: CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.173.20   inputShadowAmount as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Shadow Amount
Notes:

Name:	inputShadowAmount
Class:	double (NSNumber)
DisplayName English:	Shadow Amount
DisplayName German:	Schattenumfang
DisplayName French:	Quantit√© d‚Äôombre
DisplayName Italian:	Quantit√† ombreggiatura
DisplayName Spanish:	Cantidad de sombreado
Type:	CIAttributeTypeDistance

See AttributeinputShadowAmount for more details.
(Read and Write property)

4.173.21   inputShadowExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Shadow Extent
Notes:

Name:	inputShadowExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Shadow Extent
DisplayName German:	Schattenausdehnung
DisplayName French:	√âtendue de l‚Äôombre
DisplayName Italian:	Estensione ombreggiatura
DisplayName Spanish:	Extensi√≥n de la sombra
Type:	CIAttributeTypeRectangle

See AttributeinputShadowExtent for more details.
(Read and Write property)

4.173.22   inputShadowSize as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Shadow Size
Notes:

Name:	inputShadowSize
Class:	double (NSNumber)
DisplayName English:	Shadow Size
DisplayName German:	Schattengr√√üe
DisplayName French:	Taille de l‚Äôombre
DisplayName Italian:	Dimensioni ombreggiatura
DisplayName Spanish:	Tama√±o de la sombra
Type:	CIAttributeTypeDistance

See AttributeinputShadowSize for more details.
(Read and Write property)

4.173.23   inputTargetImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Target Image
Notes:

Name:	inputTargetImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
Type:	CIAttributeTypeImage

See AttributeinputTargetImage for more details.
(Read and Write property)

4.173.24   inputTime as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Time
Notes:

Name:	inputTime
Class:	double (NSNumber)
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
Type:	CIAttributeTypeTime

See AttributeinputTime for more details.
(Read and Write property)

4.174   class CIFilterPaletteCentroidMBS

4.174.1   class CIFilterPaletteCentroidMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Palette Centroid filter.
Notes: Details for this filter:

FilterName:	CIPaletteCentroid
DisplayName English:	Palette Centroid
DisplayName German:	Palettenschwerpunkt
DisplayName French:	Centro√Øde de la palette
DisplayName Italian:	Centroide tavolozza
DisplayName Spanish:	Centroide de la paleta

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputPaletteImage: Palette Image

- inputPerceptual: Perceptual

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.174.2 Methods

4.174.3 Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.174.4 Properties

4.174.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Palette Centroid attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.174.6 AttributeinputPaletteImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Palette Centroid attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputPaletteImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Palette Image
DisplayName German:	Palettenbild
DisplayName French:	Image de la palette
DisplayName Italian:	Immagine tavolozza
DisplayName Spanish:	Imagen de la paleta
DefaultNumber:	0
IdentityNumber:	0

4.174.7 AttributeinputPerceptual as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Palette Centroid attribute.
Notes: This attribute should have this content:

Name:	inputPerceptual
Class:	double
Type:	CIAttributeTypeBoolean
DisplayName:	Perceptual
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0

(Read only property)

4.174.8 inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.174.9 inputPaletteImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Palette Image
Notes:

Name:	inputPaletteImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Palette Image
DisplayName German:	Palettenbild
DisplayName French:	Image de la palette
DisplayName Italian:	Immagine tavolozza
DisplayName Spanish:	Imagen de la paleta
Type:	CIAttributeTypeImage

See AttributeinputPaletteImage for more details.
(Read and Write property)

4.174.10 inputPerceptual as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Perceptual
Notes:

Name:	inputPerceptual
Class:	double (NSNumber)
DisplayName English:	Perceptual
DisplayName German:	Perceptual
DisplayName French:	Perceptual
DisplayName Italian:	Perceptual
DisplayName Spanish:	Perceptual
Type:	CIAttributeTypeBoolean

See AttributeinputPerceptual for more details.
(Read and Write property)

4.175   class CIFilterPalettizeMBS

4.175.1   class CIFilterPalettizeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Palettize filter.
Notes: Details for this filter:

FilterName:	CIPalettize
DisplayName English:	Palettize
DisplayName German:	Palettieren
DisplayName French:	Indexer
DisplayName Italian:	Converti in palette
DisplayName Spanish:	Paletizar

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputPaletteImage: Palette Image

- inputPerceptual: Perceptual

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.175.2   Methods

4.175.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.175.4   Properties

4.175.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Palettize attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.175.6   AttributeinputPaletteImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Palettize attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputPaletteImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Palette Image
DisplayName German:	Palettenbild
DisplayName French:	Image de la palette
DisplayName Italian:	Immagine tavolozza
DisplayName Spanish:	Imagen de la paleta
DefaultNumber:	0
IdentityNumber:	0

4.175.7   AttributeinputPerceptual as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Palettize attribute.
Notes: This attribute should have this content:

Name:	inputPerceptual
Class:	double
Type:	CIAttributeTypeBoolean
DisplayName:	Perceptual
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0

(Read only property)

4.175.8   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.175.9   inputPaletteImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Palette Image
Notes:

Name:	inputPaletteImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Palette Image
DisplayName German:	Palettenbild
DisplayName French:	Image de la palette
DisplayName Italian:	Immagine tavolozza
DisplayName Spanish:	Imagen de la paleta
Type:	CIAttributeTypeImage

See AttributeinputPaletteImage for more details.
(Read and Write property)

4.175.10   inputPerceptual as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Perceptual
Notes:

Name:	inputPerceptual
Class:	double (NSNumber)
DisplayName English:	Perceptual
DisplayName German:	Perceptual
DisplayName French:	Perceptual
DisplayName Italian:	Perceptual
DisplayName Spanish:	Perceptual
Type:	CIAttributeTypeBoolean

See AttributeinputPerceptual for more details.
(Read and Write property)

4.176   class CIFilterParallelogramTileMBS

4.176.1   class CIFilterParallelogramTileMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Parallelogram Tile filter.
Notes: Details for this filter:

FilterName:	CIParallelogramTile
DisplayName English:	Parallelogram Tile
DisplayName German:	Parallelogramme
DisplayName French:	Mosa√Øque de parall√©logrammes
DisplayName Italian:	Mosaico parallelogramma
DisplayName Spanish:	Mosaico paralelogramo

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputAngle: Angle

- inputAcuteAngle: Acute Angle

- inputWidth: Width

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.176.2 Methods

4.176.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.176.4 Properties

4.176.5 AttributeinputAcuteAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Parallelogram Tile attribute.
Notes: This attribute should have this content:

Name:	inputAcuteAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Acute Angle
DisplayName German:	Spitzer Winkel
DisplayName French:	Angle aigu
DisplayName Italian:	Angolo acuto
DisplayName Spanish:	√Ångulo agudo
DefaultNumber:	1.570796
IdentityNumber:	1.570796
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.176.6 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Parallelogram Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

4.176.7   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Parallelogram Tile attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.176.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Parallelogram Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.176.9   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Parallelogram Tile attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	100
IdentityNumber:	100
SliderMaxNumber:	200
SliderMinNumber:	1

(Read only property)

4.176.10   inputAcuteAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Acute Angle
Notes:

See AttributeinputAcuteAngle for more details.
(Read and Write property)

Name: inputAcuteAngle
Class: double (NSNumber)
DisplayName English: Acute Angle
DisplayName German: Spitzer Winkel
DisplayName French: Angle aigu
DisplayName Italian: Angolo acuto
DisplayName Spanish: √Ångulo agudo
Type: CIAttributeTypeAngle

4.176.11   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name: inputAngle
Class: double (NSNumber)
DisplayName English: Angle
DisplayName German: Winkel
DisplayName French: Angle
DisplayName Italian: Angolo
DisplayName Spanish: √Ångulo
Type: CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.176.12   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name: inputCenter
Class: CIVectorMBS (CIVector)
DisplayName English: Center
DisplayName German: Mitte
DisplayName French: Centre
DisplayName Italian: Centro
DisplayName Spanish: Centro
Type: CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.176.13 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.176.14 inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.177   class CIFilterPDF417BarcodeGeneratorMBS

4.177.1   class CIFilterPDF417BarcodeGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage PDF417 Barcode Generator filter.
Notes: Details for this filter:

FilterName:	CIPDF417BarcodeGenerator
DisplayName English:	PDF417 Barcode Generator
DisplayName German:	PDF417 Barcode-Generator
DisplayName French:	G√©n√©rateur de code-barres PDF417
DisplayName Italian:	Generatore codice a barre PDF417
DisplayName Spanish:	Generador de c√digos de barras PDF417

Categories:

- CICategoryGenerator: Generator

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputMessage: Message

- inputMinWidth: Min Width

- inputMaxWidth: Max Width

- inputMinHeight: Min Height

- inputMaxHeight: Max Height

- inputDataColumns: Data Columns

- inputRows: Rows

- inputPreferredAspectRatio: Preferred Aspect Ratio

- inputCompactionMode: Compaction Mode

- inputCompactStyle: Compact Style

- inputCorrectionLevel: Correction Level

- inputAlwaysSpecifyCompaction: Always Specify Compaction

Output:

- outputImage

- outputCGImage

Subclass of the CIFilterMBS class.
Videos

- [Presentation from Munich conference about MBS Plugins.](#)

4.177.2   Methods

4.177.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.177.4   Properties

4.177.5   AttributeinputAlwaysSpecifyCompaction as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the PDF417 Barcode Generator attribute.
Notes: This attribute should have this content:

(Read only property)

4.177.6   AttributeinputCompactionMode as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the PDF417 Barcode Generator attribute.
Notes: This attribute should have this content:

Name:	inputAlwaysSpecifyCompaction
Class:	double
Type:	CIAttributeTypeBoolean
DisplayName English:	Always Specify Compaction
DisplayName German:	Komprimierung immer angeben
DisplayName French:	Toujours indiquer le compactage
DisplayName Italian:	Specifica sempre la compressione
DisplayName Spanish:	Especificar compactaci√n siempre
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

Name:	inputCompactionMode
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Compaction Mode
DisplayName German:	Komprimierungsmodus
DisplayName French:	Mode de compactage
DisplayName Italian:	Modalit√† di compressione
DisplayName Spanish:	Modo de compactaci√n
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	3
MinNumber:	0
SliderMaxNumber:	3
SliderMinNumber:	0

(Read only property)

4.177.7   AttributeinputCompactStyle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the PDF417 Barcode Generator attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCompactStyle
Class:	double
Type:	CIAttributeTypeBoolean
DisplayName English:	Compact Style
DisplayName German:	Komprimierungsstil
DisplayName French:	Style compact
DisplayName Italian:	Stile compatto
DisplayName Spanish:	Estilo compacto
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.177.8 AttributeinputCorrectionLevel as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the PDF417 Barcode Generator attribute.
Notes: This attribute should have this content:

Name:	inputCorrectionLevel
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Correction Level
DisplayName German:	Korrekturstufe
DisplayName French:	Niveau de correction
DisplayName Italian:	Livello di correzione
DisplayName Spanish:	Nivel de correcci√n
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	8
MinNumber:	0
SliderMaxNumber:	8
SliderMinNumber:	0

(Read only property)

4.177.9 AttributeinputDataColumns as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the PDF417 Barcode Generator attribute.
Notes: This attribute should have this content:

Name:	inputDataColumns
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Data Columns
DisplayName German:	Datenspalten
DisplayName French:	Colonnes de donn√©es
DisplayName Italian:	Colonne dati
DisplayName Spanish:	Columnas de datos
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	30
MinNumber:	1
SliderMaxNumber:	30
SliderMinNumber:	1

(Read only property)

4.177.10   AttributeinputMaxHeight as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the PDF417 Barcode Generator attribute.
Notes: This attribute should have this content:

Name:	inputMaxHeight
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Max Height
DisplayName German:	Max. H√he
DisplayName French:	Hauteur max.
DisplayName Italian:	Altezza massima
DisplayName Spanish:	Altura m√°x.
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	283
MinNumber:	13
SliderMaxNumber:	283
SliderMinNumber:	13

(Read only property)

4.177.11   AttributeinputMaxWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the PDF417 Barcode Generator attribute.
Notes: This attribute should have this content:

Name:	inputMaxWidth
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Max Width
DisplayName German:	Max. Breite
DisplayName French:	Largeur max.
DisplayName Italian:	Larghezza massima
DisplayName Spanish:	Anchura m√°x.
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	583
MinNumber:	56
SliderMaxNumber:	583
SliderMinNumber:	56

(Read only property)

4.177.12   AttributeinputMessage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the PDF417 Barcode Generator attribute.
Notes: This attribute should have this content:

(Read only property)

4.177.13   AttributeinputMinHeight as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the PDF417 Barcode Generator attribute.
Notes: This attribute should have this content:

Name:	inputMessage
Class:	Memoryblock
DisplayName English:	Message
DisplayName German:	Nachricht
DisplayName French:	Message
DisplayName Italian:	Messaggio
DisplayName Spanish:	Mensaje
DefaultNumber:	0
IdentityNumber:	0

Name:	inputMinHeight
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Min Height
DisplayName German:	Min. H√he
DisplayName French:	Hauteur min.
DisplayName Italian:	Altezza minima
DisplayName Spanish:	Altura m√n.
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	283
MinNumber:	13
SliderMaxNumber:	283
SliderMinNumber:	13

(Read only property)

4.177.14   AttributeinputMinWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the PDF417 Barcode Generator attribute.
Notes: This attribute should have this content:

(Read only property)

4.177.15   AttributeinputPreferredAspectRatio as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the PDF417 Barcode Generator attribute.

Name:	inputMinWidth
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Min Width
DisplayName German:	Min. Breite
DisplayName French:	Largeur min.
DisplayName Italian:	Larghezza minima
DisplayName Spanish:	Anchura m√n.
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	583
MinNumber:	56
SliderMaxNumber:	583
SliderMinNumber:	56

Notes: This attribute should have this content:

Name:	inputPreferredAspectRatio
Class:	double
DisplayName English:	Preferred Aspect Ratio
DisplayName German:	Bevorzugtes Seitenverh√§ltnis
DisplayName French:	Proportions pr√©f√©r√©es
DisplayName Italian:	Proporzioni preferite
DisplayName Spanish:	Proporciones preferidas
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	9.223372e+18
MinNumber:	0
SliderMaxNumber:	9.223372e+18
SliderMinNumber:	0

(Read only property)

4.177.16 AttributeinputRows as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the PDF417 Barcode Generator attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRows
Class:	double
Type:	CIAttributeTypeInteger
DisplayName English:	Rows
DisplayName German:	Zeilen
DisplayName French:	Rang√©es
DisplayName Italian:	Righe
DisplayName Spanish:	Filas
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	90
MinNumber:	3
SliderMaxNumber:	90
SliderMinNumber:	3

4.177.17   inputAlwaysSpecifyCompaction as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Always Specify Compaction
Notes:

Name:	inputAlwaysSpecifyCompaction
Class:	double (NSNumber)
DisplayName English:	Always Specify Compaction
DisplayName German:	Komprimierung immer angeben
DisplayName French:	Toujours indiquer le compactage
DisplayName Italian:	Specifica sempre la compressione
DisplayName Spanish:	Especificar compactaci√n siempre
Type:	CIAttributeTypeBoolean

See AttributeinputAlwaysSpecifyCompaction for more details.
(Read and Write property)

4.177.18   inputCompactionMode as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Compaction Mode
Notes:

See AttributeinputCompactionMode for more details.
(Read and Write property)

Name:	inputCompactionMode
Class:	double (NSNumber)
DisplayName English:	Compaction Mode
DisplayName German:	Komprimierungsmodus
DisplayName French:	Mode de compactage
DisplayName Italian:	Modalit√† di compressione
DisplayName Spanish:	Modo de compactaci√n
Type:	CIAttributeTypeInteger

4.177.19   inputCompactStyle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Compact Style
Notes:

Name:	inputCompactStyle
Class:	double (NSNumber)
DisplayName English:	Compact Style
DisplayName German:	Komprimierungsstil
DisplayName French:	Style compact
DisplayName Italian:	Stile compatto
DisplayName Spanish:	Estilo compacto
Type:	CIAttributeTypeBoolean

See AttributeinputCompactStyle for more details.
(Read and Write property)

4.177.20   inputCorrectionLevel as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Correction Level
Notes:

Name:	inputCorrectionLevel
Class:	double (NSNumber)
DisplayName English:	Correction Level
DisplayName German:	Korrekturstufe
DisplayName French:	Niveau de correction
DisplayName Italian:	Livello di correzione
DisplayName Spanish:	Nivel de correcci√n
Type:	CIAttributeTypeInteger

See AttributeinputCorrectionLevel for more details.
(Read and Write property)

4.177.21   inputDataColumns as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Data Columns
Notes:

Name:	inputDataColumns
Class:	double (NSNumber)
DisplayName English:	Data Columns
DisplayName German:	Datenspalten
DisplayName French:	Colonnes de donn√©es
DisplayName Italian:	Colonne dati
DisplayName Spanish:	Columnas de datos
Type:	CIAttributeTypeInteger

See AttributeinputDataColumns for more details.
(Read and Write property)

4.177.22   inputMaxHeight as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Max Height
Notes:

Name:	inputMaxHeight
Class:	double (NSNumber)
DisplayName English:	Max Height
DisplayName German:	Max. H√he
DisplayName French:	Hauteur max.
DisplayName Italian:	Altezza massima
DisplayName Spanish:	Altura m√°x.
Type:	CIAttributeTypeInteger

See AttributeinputMaxHeight for more details.
(Read and Write property)

4.177.23 inputMaxWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Max Width
Notes:

Name:	inputMaxWidth
Class:	double (NSNumber)
DisplayName English:	Max Width
DisplayName German:	Max. Breite
DisplayName French:	Largeur max.
DisplayName Italian:	Larghezza massima
DisplayName Spanish:	Anchura m√°x.
Type:	CIAttributeTypeInteger

See AttributeinputMaxWidth for more details.
(Read and Write property)

4.177.24 inputMessage as Memoryblock

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Message
Notes:

Name:	inputMessage
Class:	Memoryblock (NSData)
DisplayName English:	Message
DisplayName German:	Nachricht
DisplayName French:	Message
DisplayName Italian:	Messaggio
DisplayName Spanish:	Mensaje

See AttributeinputMessage for more details.
(Read and Write property)

4.177.25 inputMinHeight as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Min Height
Notes:

Name:	inputMinHeight
Class:	double (NSNumber)
DisplayName English:	Min Height
DisplayName German:	Min. H√he
DisplayName French:	Hauteur min.
DisplayName Italian:	Altezza minima
DisplayName Spanish:	Altura m√n.
Type:	CIAttributeTypeInteger

See AttributeinputMinHeight for more details.
(Read and Write property)

4.177.26   inputMinWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Min Width
Notes:

Name:	inputMinWidth
Class:	double (NSNumber)
DisplayName English:	Min Width
DisplayName German:	Min. Breite
DisplayName French:	Largeur min.
DisplayName Italian:	Larghezza minima
DisplayName Spanish:	Anchura m√n.
Type:	CIAttributeTypeInteger

See AttributeinputMinWidth for more details.
(Read and Write property)

4.177.27   inputPreferredAspectRatio as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Preferred Aspect Ratio
Notes:

See AttributeinputPreferredAspectRatio for more details.
(Read and Write property)

Name:	inputPreferredAspectRatio
Class:	double (NSNumber)
DisplayName English:	Preferred Aspect Ratio
DisplayName German:	Bevorzugtes Seitenverh√§ltnis
DisplayName French:	Proportions pr√©f√©r√©es
DisplayName Italian:	Proporzioni preferite
DisplayName Spanish:	Proporciones preferidas

4.177.28 inputRows as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Rows
Notes:

Name:	inputRows
Class:	double (NSNumber)
DisplayName English:	Rows
DisplayName German:	Zeilen
DisplayName French:	Rang√©es
DisplayName Italian:	Righe
DisplayName Spanish:	Filas
Type:	CIAttributeTypeInteger

See AttributeinputRows for more details.
(Read and Write property)

4.178   class CIFilterPersonSegmentationMBS

4.178.1   class CIFilterPersonSegmentationMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Person Segmentation filter.
Notes: Details for this filter:

FilterName:	CIPersonSegmentation
DisplayName English:	Person Segmentation
DisplayName German:	Personensegmentierung
DisplayName French:	Segmentation des personnes
DisplayName Italian:	Segmentazione persone
DisplayName Spanish:	Segmentaci√n de personas

Categories:

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryStylize: Stylize

Input:

- inputImage: Image

- inputQualityLevel: Quality Level

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.178.2 Methods

4.178.3 Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.178.4 Properties

4.178.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Person Segmentation attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.178.6 AttributeinputQualityLevel as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Person Segmentation attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputQualityLevel
Class:	double
DisplayName English:	Quality Level
DisplayName German:	Qualit√§tsstufe
DisplayName French:	Niveau de qualit√©
DisplayName Italian:	Livello qualit√†
DisplayName Spanish:	Nivel de calidad
DefaultNumber:	0
IdentityNumber:	0

4.178.7   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.178.8   inputQualityLevel as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Quality Level
Notes:

Name:	inputQualityLevel
Class:	double (NSNumber)
DisplayName English:	Quality Level
DisplayName German:	Qualit√§tsstufe
DisplayName French:	Niveau de qualit√©
DisplayName Italian:	Livello qualit√†
DisplayName Spanish:	Nivel de calidad

See AttributeinputQualityLevel for more details.
(Read and Write property)

4.179   class CIFilterPerspectiveCorrectionMBS

4.179.1   class CIFilterPerspectiveCorrectionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Perspective Correction filter.
Notes: Details for this filter:

FilterName:	CIPerspectiveCorrection
DisplayName English:	Perspective Correction
DisplayName German:	Perspektivenkorrektur
DisplayName French:	Correction de la perspective
DisplayName Italian:	Correzione prospettiva
DisplayName Spanish:	Correcci√n de la perspectiva

Categories:

- CICategoryGeometryAdjustment: Geometry Adjustment

- CICategoryStillImage: Still Image

- CICategoryVideo: Video

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTopLeft: Top Left

- inputTopRight: Top Right

- inputBottomRight: Bottom Right

- inputBottomLeft: Bottom Left

- inputCrop: Crop

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.179.2 Methods

4.179.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.179.4 Properties

4.179.5 AttributeinputBottomLeft as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Correction attribute.
Notes: This attribute should have this content:

Name:	inputBottomLeft
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Bottom Left
DisplayName German:	Unten links
DisplayName French:	En bas √† gauche
DisplayName Italian:	In basso a sinistra
DisplayName Spanish:	Abajo izquierda
DefaultVector:	[155 153]
IdentityVector:	n/a

(Read only property)

4.179.6 AttributeinputBottomRight as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Correction attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputBottomRight
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Bottom Right
DisplayName German:	Unten rechts
DisplayName French:	En bas √† droite
DisplayName Italian:	In basso a destra
DisplayName Spanish:	Abajo derecha
DefaultVector:	[548 140]
IdentityVector:	n/a

4.179.7   AttributeinputCrop as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Correction attribute.
Notes: This attribute should have this content:

Name:	inputCrop
Class:	double
Type:	CIAttributeTypeBoolean
DisplayName:	Crop
DefaultNumber:	1
IdentityNumber:	0

(Read only property)

4.179.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Correction attribute.
Notes: This attribute should have this content:

(Read only property)

4.179.9   AttributeinputTopLeft as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

Function: Details about the Perspective Correction attribute.
Notes: This attribute should have this content:

Name:	inputTopLeft
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Top Left
DisplayName German:	Oben links
DisplayName French:	En haut √† gauche
DisplayName Italian:	In alto a sinistra
DisplayName Spanish:	Arriba izquierda
DefaultVector:	[118 484]
IdentityVector:	n/a

(Read only property)

4.179.10   AttributeinputTopRight as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Correction attribute.
Notes: This attribute should have this content:

(Read only property)

4.179.11   inputBottomLeft as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputTopRight
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Top Right
DisplayName German:	Oben rechts
DisplayName French:	En haut √† droite
DisplayName Italian:	In alto a destra
DisplayName Spanish:	Arriba derecha
DefaultVector:	[646 507]
IdentityVector:	n/a

Function: The attribute Bottom Left
Notes:

Name:	inputBottomLeft
Class:	CIVectorMBS (CIVector)
DisplayName English:	Bottom Left
DisplayName German:	Unten links
DisplayName French:	En bas √† gauche
DisplayName Italian:	In basso a sinistra
DisplayName Spanish:	Abajo izquierda
Type:	CIAttributeTypePosition

See AttributeinputBottomLeft for more details.
(Read and Write property)

4.179.12   inputBottomRight as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bottom Right
Notes:

Name:	inputBottomRight
Class:	CIVectorMBS (CIVector)
DisplayName English:	Bottom Right
DisplayName German:	Unten rechts
DisplayName French:	En bas √† droite
DisplayName Italian:	In basso a destra
DisplayName Spanish:	Abajo derecha
Type:	CIAttributeTypePosition

See AttributeinputBottomRight for more details.

(Read and Write property)

4.179.13 inputCrop as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Crop
Notes:

Name:	inputCrop
Class:	double (NSNumber)
DisplayName English:	Crop
DisplayName German:	Crop
DisplayName French:	Crop
DisplayName Italian:	Crop
DisplayName Spanish:	Crop
Type:	CIAttributeTypeBoolean

See AttributeinputCrop for more details.
(Read and Write property)

4.179.14 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.179.15   inputTopLeft as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Top Left
Notes:

Name:	inputTopLeft
Class:	CIVectorMBS (CIVector)
DisplayName English:	Top Left
DisplayName German:	Oben links
DisplayName French:	En haut √† gauche
DisplayName Italian:	In alto a sinistra
DisplayName Spanish:	Arriba izquierda
Type:	CIAttributeTypePosition

See AttributeinputTopLeft for more details.
(Read and Write property)

4.179.16   inputTopRight as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Top Right
Notes:

Name:	inputTopRight
Class:	CIVectorMBS (CIVector)
DisplayName English:	Top Right
DisplayName German:	Oben rechts
DisplayName French:	En haut √† droite
DisplayName Italian:	In alto a destra
DisplayName Spanish:	Arriba derecha
Type:	CIAttributeTypePosition

See AttributeinputTopRight for more details.
(Read and Write property)

4.180 class CIFilterPerspectiveRotateMBS

4.180.1 class CIFilterPerspectiveRotateMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Perspective Rotate filter.
Notes: Details for this filter:

FilterName:	CIPerspectiveRotate
DisplayName English:	Perspective Rotate
DisplayName German:	Perspektivisch drehen
DisplayName French:	Rotation en perspective
DisplayName Italian:	Rotazione prospettica
DisplayName Spanish:	Rotaci√n de perspectiva

Categories:

- CICategoryGeometryAdjustment: Geometry Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputFocalLength: Focal Length

- inputPitch: Pitch

- inputYaw: Yaw

- inputRoll: Roll

Output:

- outputImage

- outputTransform

Subclass of the CIFilterMBS class.
Blog Entries

- [MBS Xojo Plugins, version 23.0pr5](#)

4.180.2 Methods

4.180.3 Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.180.4 Properties

4.180.5 AttributeinputFocalLength as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Perspective Rotate attribute.
Notes: This attribute should have this content:

Name:	inputFocalLength
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Focal Length
DisplayName German:	Brennweite
DisplayName French:	Longueur focale
DisplayName Italian:	Lunghezza focale
DisplayName Spanish:	Longitud focal
DefaultNumber:	28
IdentityNumber:	0

(Read only property)

4.180.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Perspective Rotate attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.180.7   AttributeinputPitch as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Perspective Rotate attribute.
Notes: This attribute should have this content:

Name:	inputPitch
Class:	double
Type:	CIAttributeTypeAngle
DisplayName:	Pitch
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.180.8   AttributeinputRoll as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Perspective Rotate attribute.
Notes: This attribute should have this content:

Name:	inputRoll
Class:	double
Type:	CIAttributeTypeAngle
DisplayName:	Roll
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.180.9   AttributeinputYaw as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Perspective Rotate attribute.
Notes: This attribute should have this content:

Name:	inputYaw
Class:	double
Type:	CIAttributeTypeAngle
DisplayName:	Yaw
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.180.10   inputFocalLength as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Focal Length
Notes:

See AttributeinputFocalLength for more details.
(Read and Write property)

4.180.11   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Name:	inputFocalLength
Class:	double (NSNumber)
DisplayName English:	Focal Length
DisplayName German:	Brennweite
DisplayName French:	Longueur focale
DisplayName Italian:	Lunghezza focale
DisplayName Spanish:	Longitud focal
Type:	CIAttributeTypeScalar

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.180.12   inputPitch as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Pitch
Notes:

Name:	inputPitch
Class:	double (NSNumber)
DisplayName English:	Pitch
DisplayName German:	Pitch
DisplayName French:	Pitch
DisplayName Italian:	Pitch
DisplayName Spanish:	Pitch
Type:	CIAttributeTypeAngle

See AttributeinputPitch for more details.
(Read and Write property)

4.180.13   inputRoll as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Roll
Notes:

Name:	inputRoll
Class:	double (NSNumber)
DisplayName English:	Roll
DisplayName German:	Roll
DisplayName French:	Roll
DisplayName Italian:	Roll
DisplayName Spanish:	Roll
Type:	CIAttributeTypeAngle

See AttributeinputRoll for more details.
(Read and Write property)

4.180.14   inputYaw as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Yaw
Notes:

Name:	inputYaw
Class:	double (NSNumber)
DisplayName English:	Yaw
DisplayName German:	Yaw
DisplayName French:	Yaw
DisplayName Italian:	Yaw
DisplayName Spanish:	Yaw
Type:	CIAttributeTypeAngle

See AttributeinputYaw for more details.
(Read and Write property)

4.181 class CIFilterPerspectiveTileMBS

4.181.1 class CIFilterPerspectiveTileMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Perspective Tile filter.
Notes: Details for this filter:

FilterName:	CIPerspectiveTile
DisplayName English:	Perspective Tile
DisplayName German:	Perspektivisch kacheln
DisplayName French:	Mosa√Øque en perspective
DisplayName Italian:	Mosaico prospettiva
DisplayName Spanish:	Mosaico en perspectiva

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTopLeft: Top Left

- inputTopRight: Top Right

- inputBottomRight: Bottom Right

- inputBottomLeft: Bottom Left

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.181.2   Methods

4.181.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.181.4   Properties

4.181.5   AttributeinputBottomLeft as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Tile attribute.
Notes: This attribute should have this content:

Name:	inputBottomLeft
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Bottom Left
DisplayName German:	Unten links
DisplayName French:	En bas √† gauche
DisplayName Italian:	In basso a sinistra
DisplayName Spanish:	Abajo izquierda
DefaultVector:	[155 153]
IdentityVector:	n/a

(Read only property)

4.181.6   AttributeinputBottomRight as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputBottomRight
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Bottom Right
DisplayName German:	Unten rechts
DisplayName French:	En bas √† droite
DisplayName Italian:	In basso a destra
DisplayName Spanish:	Abajo derecha
DefaultVector:	[548 140]
IdentityVector:	n/a

4.181.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Tile attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.181.8   AttributeinputTopLeft as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputTopLeft
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Top Left
DisplayName German:	Oben links
DisplayName French:	En haut √† gauche
DisplayName Italian:	In alto a sinistra
DisplayName Spanish:	Arriba izquierda
DefaultVector:	[118 484]
IdentityVector:	n/a

4.181.9   AttributeinputTopRight as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Tile attribute.
Notes: This attribute should have this content:

Name:	inputTopRight
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Top Right
DisplayName German:	Oben rechts
DisplayName French:	En haut √† droite
DisplayName Italian:	In alto a destra
DisplayName Spanish:	Arriba derecha
DefaultVector:	[646 507]
IdentityVector:	n/a

(Read only property)

4.181.10   inputBottomLeft as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bottom Left
Notes:

See AttributeinputBottomLeft for more details.
(Read and Write property)

Name:	inputBottomLeft
Class:	CIVectorMBS (CIVector)
DisplayName English:	Bottom Left
DisplayName German:	Unten links
DisplayName French:	En bas √† gauche
DisplayName Italian:	In basso a sinistra
DisplayName Spanish:	Abajo izquierda
Type:	CIAttributeTypePosition

4.181.11   inputBottomRight as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bottom Right
Notes:

Name:	inputBottomRight
Class:	CIVectorMBS (CIVector)
DisplayName English:	Bottom Right
DisplayName German:	Unten rechts
DisplayName French:	En bas √† droite
DisplayName Italian:	In basso a destra
DisplayName Spanish:	Abajo derecha
Type:	CIAttributeTypePosition

See AttributeinputBottomRight for more details.
(Read and Write property)

4.181.12   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.181.13   inputTopLeft as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Top Left
Notes:

Name:	inputTopLeft
Class:	CIVectorMBS (CIVector)
DisplayName English:	Top Left
DisplayName German:	Oben links
DisplayName French:	En haut √† gauche
DisplayName Italian:	In alto a sinistra
DisplayName Spanish:	Arriba izquierda
Type:	CIAttributeTypePosition

See AttributeinputTopLeft for more details.
(Read and Write property)

4.181.14   inputTopRight as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Top Right
Notes:

Name:	inputTopRight
Class:	CIVectorMBS (CIVector)
DisplayName English:	Top Right
DisplayName German:	Oben rechts
DisplayName French:	En haut √† droite
DisplayName Italian:	In alto a destra
DisplayName Spanish:	Arriba derecha
Type:	CIAttributeTypePosition

See AttributeinputTopRight for more details.
(Read and Write property)

4.182 class CIFilterPerspectiveTransformMBS

4.182.1 class CIFilterPerspectiveTransformMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Perspective Transform filter.
Notes: Details for this filter:

FilterName:	CIPerspectiveTransform
DisplayName English:	Perspective Transform
DisplayName German:	Perspektivisch transformieren
DisplayName French:	Transformation en perspective
DisplayName Italian:	Trasformazione prospettiva
DisplayName Spanish:	Transformaci√n en perspectiva

Categories:

- CICategoryGeometryAdjustment: Geometry Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTopLeft: Top Left

- inputTopRight: Top Right

- inputBottomRight: Bottom Right

- inputBottomLeft: Bottom Left

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.182.2   Methods

4.182.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.182.4   Properties

4.182.5   AttributeinputBottomLeft as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Transform attribute.
Notes: This attribute should have this content:

Name:	inputBottomLeft
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Bottom Left
DisplayName German:	Unten links
DisplayName French:	En bas √† gauche
DisplayName Italian:	In basso a sinistra
DisplayName Spanish:	Abajo izquierda
DefaultVector:	[155 153]
IdentityVector:	n/a

(Read only property)

4.182.6   AttributeinputBottomRight as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Transform attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputBottomRight
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Bottom Right
DisplayName German:	Unten rechts
DisplayName French:	En bas √† droite
DisplayName Italian:	In basso a destra
DisplayName Spanish:	Abajo derecha
DefaultVector:	[548 140]
IdentityVector:	n/a

4.182.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Transform attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.182.8   AttributeinputTopLeft as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Transform attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputTopLeft
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Top Left
DisplayName German:	Oben links
DisplayName French:	En haut √† gauche
DisplayName Italian:	In alto a sinistra
DisplayName Spanish:	Arriba izquierda
DefaultVector:	[118 484]
IdentityVector:	n/a

4.182.9   AttributeinputTopRight as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Transform attribute.
Notes: This attribute should have this content:

Name:	inputTopRight
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Top Right
DisplayName German:	Oben rechts
DisplayName French:	En haut √† droite
DisplayName Italian:	In alto a destra
DisplayName Spanish:	Arriba derecha
DefaultVector:	[646 507]
IdentityVector:	n/a

(Read only property)

4.182.10   inputBottomLeft as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bottom Left
Notes:

See AttributeinputBottomLeft for more details.
(Read and Write property)

Name:	inputBottomLeft
Class:	CIVectorMBS (CIVector)
DisplayName English:	Bottom Left
DisplayName German:	Unten links
DisplayName French:	En bas √† gauche
DisplayName Italian:	In basso a sinistra
DisplayName Spanish:	Abajo izquierda
Type:	CIAttributeTypePosition

4.182.11   inputBottomRight as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bottom Right
Notes:

Name:	inputBottomRight
Class:	CIVectorMBS (CIVector)
DisplayName English:	Bottom Right
DisplayName German:	Unten rechts
DisplayName French:	En bas √† droite
DisplayName Italian:	In basso a destra
DisplayName Spanish:	Abajo derecha
Type:	CIAttributeTypePosition

See AttributeinputBottomRight for more details.
(Read and Write property)

4.182.12   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.182.13   inputTopLeft as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Top Left
Notes:

Name:	inputTopLeft
Class:	CIVectorMBS (CIVector)
DisplayName English:	Top Left
DisplayName German:	Oben links
DisplayName French:	En haut √† gauche
DisplayName Italian:	In alto a sinistra
DisplayName Spanish:	Arriba izquierda
Type:	CIAttributeTypePosition

See AttributeinputTopLeft for more details.
(Read and Write property)

4.182.14   inputTopRight as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Top Right
Notes:

Name:	inputTopRight
Class:	CIVectorMBS (CIVector)
DisplayName English:	Top Right
DisplayName German:	Oben rechts
DisplayName French:	En haut √† droite
DisplayName Italian:	In alto a destra
DisplayName Spanish:	Arriba derecha
Type:	CIAttributeTypePosition

See AttributeinputTopRight for more details.
(Read and Write property)

4.183 class CIFilterPerspectiveTransformWithExtentMBS

4.183.1 class CIFilterPerspectiveTransformWithExtentMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Perspective Transform with Extent filter.
Notes: Details for this filter:

FilterName:	CIPerspectiveTransformWithExtent
DisplayName English:	Perspective Transform with Extent
DisplayName German:	Perspektivische Transformation mit Ausbreitung
DisplayName French:	Transformation de perspective avec Extent
DisplayName Italian:	Trasformazione prospettiva con ampiezza
DisplayName Spanish:	Transformaci√n en perspectiva con amplitud

Categories:

- CICategoryGeometryAdjustment: Geometry Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputExtent: Extent

- inputTopLeft: Top Left

- inputTopRight: Top Right

- inputBottomRight: Bottom Right

- inputBottomLeft: Bottom Left

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.183.2   Methods

4.183.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.183.4   Properties

4.183.5   AttributeinputBottomLeft as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Transform with Extent attribute.
Notes: This attribute should have this content:

Name:	inputBottomLeft
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Bottom Left
DisplayName German:	Unten links
DisplayName French:	En bas √† gauche
DisplayName Italian:	In basso a sinistra
DisplayName Spanish:	Abajo izquierda
DefaultVector:	[155 153]
IdentityVector:	n/a

(Read only property)

4.183.6   AttributeinputBottomRight as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Transform with Extent attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputBottomRight
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Bottom Right
DisplayName German:	Unten rechts
DisplayName French:	En bas √† droite
DisplayName Italian:	In basso a destra
DisplayName Spanish:	Abajo derecha
DefaultVector:	[548 140]
IdentityVector:	n/a

4.183.7 AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Transform with Extent attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 300 300]
IdentityVector:	n/a

(Read only property)

4.183.8 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Transform with Extent attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.183.9   AttributeinputTopLeft as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Transform with Extent attribute.
Notes: This attribute should have this content:

Name:	inputTopLeft
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Top Left
DisplayName German:	Oben links
DisplayName French:	En haut √† gauche
DisplayName Italian:	In alto a sinistra
DisplayName Spanish:	Arriba izquierda
DefaultVector:	[118 484]
IdentityVector:	n/a

(Read only property)

4.183.10   AttributeinputTopRight as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Perspective Transform with Extent attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputTopRight
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Top Right
DisplayName German:	Oben rechts
DisplayName French:	En haut √† droite
DisplayName Italian:	In alto a destra
DisplayName Spanish:	Arriba derecha
DefaultVector:	[646 507]
IdentityVector:	n/a

4.183.11   inputBottomLeft as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bottom Left
Notes:

Name:	inputBottomLeft
Class:	CIVectorMBS (CIVector)
DisplayName English:	Bottom Left
DisplayName German:	Unten links
DisplayName French:	En bas √† gauche
DisplayName Italian:	In basso a sinistra
DisplayName Spanish:	Abajo izquierda
Type:	CIAttributeTypePosition

See AttributeinputBottomLeft for more details.
(Read and Write property)

4.183.12   inputBottomRight as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Bottom Right
Notes:

See AttributeinputBottomRight for more details.
(Read and Write property)

Name:	inputBottomRight
Class:	CIVectorMBS (CIVector)
DisplayName English:	Bottom Right
DisplayName German:	Unten rechts
DisplayName French:	En bas √† droite
DisplayName Italian:	In basso a destra
DisplayName Spanish:	Abajo derecha
Type:	CIAttributeTypePosition

4.183.13   inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.183.14   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.183.15 inputTopLeft as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Top Left
Notes:

Name:	inputTopLeft
Class:	CIVectorMBS (CIVector)
DisplayName English:	Top Left
DisplayName German:	Oben links
DisplayName French:	En haut √† gauche
DisplayName Italian:	In alto a sinistra
DisplayName Spanish:	Arriba izquierda
Type:	CIAttributeTypePosition

See AttributeinputTopLeft for more details.
(Read and Write property)

4.183.16 inputTopRight as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Top Right
Notes:

Name:	inputTopRight
Class:	CIVectorMBS (CIVector)
DisplayName English:	Top Right
DisplayName German:	Oben rechts
DisplayName French:	En haut √† droite
DisplayName Italian:	In alto a destra
DisplayName Spanish:	Arriba derecha
Type:	CIAttributeTypePosition

See AttributeinputTopRight for more details.
(Read and Write property)

4.184   class CIFilterPhotoEffectChromeMBS

4.184.1   class CIFilterPhotoEffectChromeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Photo Effect Chrome filter.
Notes: Details for this filter:

FilterName:	CIPhotoEffectChrome
DisplayName English:	Photo Effect Chrome
DisplayName German:	Fotoeffekt ‚ÄûChrom‚Äú
DisplayName French:	Effet de photo Chrom√©
DisplayName Italian:	Effetto foto Chrome
DisplayName Spanish:	Efecto fotogr√°fico Chrome

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryXMPSerializable: CICategoryXMPSerializable

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.184.2   Methods

4.184.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.184.4   Properties

4.184.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Photo Effect Chrome attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.184.6   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.185 class CIFilterPhotoEffectFadeMBS

4.185.1 class CIFilterPhotoEffectFadeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Photo Effect Fade filter.
Notes: Details for this filter:

FilterName:	CIPhotoEffectFade
DisplayName English:	Photo Effect Fade
DisplayName German:	Fotoeffekt ‚ÄûAlt‚Äú
DisplayName French:	Effet de photo Fondu
DisplayName Italian:	Effetto foto Dissolvenza
DisplayName Spanish:	Efecto fotogr√°fico Fundido

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryXMPSerializable: CICategoryXMPSerializable

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.185.2   Methods

4.185.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.185.4   Properties

4.185.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Photo Effect Fade attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.185.6   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.186   class CIFilterPhotoEffectInstantMBS

4.186.1   class CIFilterPhotoEffectInstantMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Photo Effect Instant filter.
Notes: Details for this filter:

FilterName:	CIPhotoEffectInstant
DisplayName English:	Photo Effect Instant
DisplayName German:	Fotoeffekt ‚ÄûSofortbild‚Äú
DisplayName French:	Effet de photo Instantan√©
DisplayName Italian:	Effetto foto Instant
DisplayName Spanish:	Efecto fotogr√°fico Instant

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryXMPSerializable: CICategoryXMPSerializable

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.186.2   Methods

4.186.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.186.4   Properties

4.186.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Photo Effect Instant attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.186.6   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.187 class CIFilterPhotoEffectMonoMBS

4.187.1 class CIFilterPhotoEffectMonoMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Photo Effect Mono filter.
Notes: Details for this filter:

FilterName:	CIPhotoEffectMono
DisplayName English:	Photo Effect Mono
DisplayName German:	Fotoeffekt ‚ÄûS/W hell‚Äú
DisplayName French:	Effet de photo Mono
DisplayName Italian:	Effetto foto Mono
DisplayName Spanish:	Efecto fotogr√°fico Mono

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryXMPSerializable: CICategoryXMPSerializable

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.187.2   Methods

4.187.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.187.4   Properties

4.187.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Photo Effect Mono attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.187.6   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.188   class CIFilterPhotoEffectNoirMBS

4.188.1   class CIFilterPhotoEffectNoirMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Photo Effect Noir filter.
Notes: Details for this filter:

FilterName:	CIPhotoEffectNoir
DisplayName English:	Photo Effect Noir
DisplayName German:	Fotoeffekt ‚ÄûS/W dunkel‚Äú
DisplayName French:	Effet de photo Noir
DisplayName Italian:	Effetto foto Noir
DisplayName Spanish:	Efecto fotogr√°fico Noir

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryXMPSerializable: CICategoryXMPSerializable

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.188.2 Methods

4.188.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.188.4 Properties

4.188.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Photo Effect Noir attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.188.6 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.189 class CIFilterPhotoEffectProcessMBS

4.189.1 class CIFilterPhotoEffectProcessMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Photo Effect Process filter.
Notes: Details for this filter:

FilterName:	CIPhotoEffectProcess
DisplayName English:	Photo Effect Process
DisplayName German:	Fotoeffekt ‚ÄûProzess‚Äú
DisplayName French:	Effet de photo Traitement
DisplayName Italian:	Effetto foto Processing
DisplayName Spanish:	Efecto fotogr√°fico Process

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryXMPSerializable: CICategoryXMPSerializable

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.189.2   Methods

4.189.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.189.4   Properties

4.189.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Photo Effect Process attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.189.6   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.190   class CIFilterPhotoEffectTonalMBS

4.190.1   class CIFilterPhotoEffectTonalMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Photo Effect Tonal filter.
Notes: Details for this filter:

FilterName:	CIPhotoEffectTonal
DisplayName English:	Photo Effect Tonal
DisplayName German:	Fotoeffekt ‚ÄûS/W mittel‚Äú
DisplayName French:	Effet de photo Tonalit√©s
DisplayName Italian:	Effetto foto Tonale
DisplayName Spanish:	Efecto fotogr√°fico Tonal

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryXMPSerializable: CICategoryXMPSerializable

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.190.2 Methods

4.190.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.190.4 Properties

4.190.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Photo Effect Tonal attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.190.6 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.191 class CIFilterPhotoEffectTransferMBS

4.191.1 class CIFilterPhotoEffectTransferMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Photo Effect Transfer filter.
Notes: Details for this filter:

FilterName:	CIPhotoEffectTransfer
DisplayName English:	Photo Effect Transfer
DisplayName German:	Fotoeffekt ‚ÄûTransfer‚Äú
DisplayName French:	Effet de photo Transfert
DisplayName Italian:	Effetto foto Transfer
DisplayName Spanish:	Efecto fotogr√°fico Transfer

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryXMPSerializable: CICategoryXMPSerializable

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.191.2   Methods

4.191.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.191.4   Properties

4.191.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Photo Effect Transfer attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.191.6   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.192   class CIFilterPinchDistortionMBS

4.192.1   class CIFilterPinchDistortionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Pinch Distortion filter.
Notes: Details for this filter:

FilterName:	CIPinchDistortion
DisplayName English:	Pinch Distortion
DisplayName German:	Verzerrung ‚ÄûDr√°cken‚Äú
DisplayName French:	D√©formation Pincement
DisplayName Italian:	Distorsione minima
DisplayName Spanish:	Distorsi√≥n por contracci√≥n

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputRadius: Radius

- inputScale: Scale

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.192.2　Methods

4.192.3　Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.192.4　Properties

4.192.5　AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Pinch Distortion attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.192.6　AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Pinch Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.192.7   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Pinch Distortion attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	300
IdentityNumber:	0
SliderMaxNumber:	1000
SliderMinNumber:	0

(Read only property)

4.192.8   AttributeinputScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Pinch Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputScale
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
DefaultNumber:	0.5
IdentityNumber:	0
SliderMaxNumber:	2
SliderMinNumber:	0

4.192.9   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.192.10   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.192.11   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.
(Read and Write property)

4.192.12   inputScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale
Notes:

Name:	inputScale
Class:	double (NSNumber)
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
Type:	CIAttributeTypeScalar

See AttributeinputScale for more details.
(Read and Write property)

4.193   class CIFilterPinLightBlendModeMBS

4.193.1   class CIFilterPinLightBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Pin Light Blend Mode filter.
Notes: Details for this filter:

FilterName:	CIPinLightBlendMode
DisplayName English:	Pin Light Blend Mode
DisplayName German:	Mischmethode ‚ÄûPunktuelles Licht‚Äú
DisplayName French:	√âpingler le mode de fusion Lumi√®re
DisplayName Italian:	Modalit√† sfumatura luce puntiforme
DisplayName Spanish:	Modo de mezcla por luz focal

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.193.2   Methods

4.193.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.193.4   Properties

4.193.5   AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Pin Light Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.193.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Pin Light Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.193.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d,Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.193.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.194   class CIFilterPixellateMBS

4.194.1   class CIFilterPixellateMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Pixelate filter.
Notes: Details for this filter:

FilterName:	CIPixellate
DisplayName English:	Pixelate
DisplayName German:	Pixeln
DisplayName French:	Pix√©liser
DisplayName Italian:	Suddividi in pixel
DisplayName Spanish:	Pixelar

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputCenter: Center

- inputScale: Scale

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.194.2 Methods

4.194.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.194.4 Properties

4.194.5 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Pixelate attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.194.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Pixelate attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.194.7   AttributeinputScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Pixelate attribute.
Notes: This attribute should have this content:

Name:	inputScale
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
DefaultNumber:	8
IdentityNumber:	0
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	100
SliderMinNumber:	1

(Read only property)

4.194.8   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

(Read and Write property)

4.194.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.194.10   inputScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale
Notes:

See AttributeinputScale for more details.
(Read and Write property)

Name:	inputScale
Class:	double (NSNumber)
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
Type:	CIAttributeTypeDistance

4.195 class CIFilterPointillizeMBS

4.195.1 class CIFilterPointillizeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Pointillize filter.
Notes: Details for this filter:

FilterName:	CIPointillize
DisplayName English:	Pointillize
DisplayName German:	Punktieren
DisplayName French:	Pointilliste
DisplayName Italian:	Divisione in punti
DisplayName Spanish:	Puntillear

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputRadius: Radius

- inputCenter: Center

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.195.2   Methods

4.195.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.195.4   Properties

4.195.5   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Pointillize attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.195.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Pointillize attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.195.7 AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Pointillize attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	20
IdentityNumber:	1
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	100
SliderMinNumber:	1

(Read only property)

4.195.8 inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

(Read and Write property)

4.195.9   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.195.10   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

4.196   class CIFilterQRCodeGeneratorMBS

4.196.1   class CIFilterQRCodeGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage QR Code Generator filter.
Notes: Details for this filter:

FilterName:	CIQRCodeGenerator
DisplayName English:	QR Code Generator
DisplayName German:	QR-Code-Generator
DisplayName French:	G√©n√©rateur de code¬†QR
DisplayName Italian:	Generatore codice QR
DisplayName Spanish:	Generador de c√digos QR

Categories:

- CICategoryGenerator: Generator
- CICategoryStillImage: Still Image
- CICategoryBuiltIn: Built-In

Input:

- inputMessage: Message
- inputCorrectionLevel: Correction Level

Output:

- outputImage
- outputCGImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo plug-ins in version 16.0

Videos

- Presentation from Munich conference about MBS Plugins.

4.196.2 Methods

4.196.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.196.4 Properties

4.196.5 AttributeinputCorrectionLevel as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the QR Code Generator attribute.
Notes: This attribute should have this content:

Name:	inputCorrectionLevel
Class:	String
DisplayName English:	Correction Level
DisplayName German:	Korrekturstufe
DisplayName French:	Niveau de correction
DisplayName Italian:	Livello di correzione
DisplayName Spanish:	Nivel de correcci√n
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.196.6 AttributeinputMessage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the QR Code Generator attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputMessage
Class:	Memoryblock
DisplayName English:	Message
DisplayName German:	Nachricht
DisplayName French:	Message
DisplayName Italian:	Messaggio
DisplayName Spanish:	Mensaje
DefaultNumber:	0
IdentityNumber:	0

4.196.7   inputCorrectionLevel as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Correction Level
Notes:

Name:	inputCorrectionLevel
Class:	String (NSString)
DisplayName English:	Correction Level
DisplayName German:	Korrekturstufe
DisplayName French:	Niveau de correction
DisplayName Italian:	Livello di correzione
DisplayName Spanish:	Nivel de correcci√n

See AttributeinputCorrectionLevel for more details.
(Read and Write property)

4.196.8   inputMessage as Memoryblock

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Message
Notes:

Name:	inputMessage
Class:	Memoryblock (NSData)
DisplayName English:	Message
DisplayName German:	Nachricht
DisplayName French:	Message
DisplayName Italian:	Messaggio
DisplayName Spanish:	Mensaje

See AttributeinputMessage for more details.
(Read and Write property)

4.197   class CIFilterRadialGradientMBS

4.197.1   class CIFilterRadialGradientMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Radial Gradient filter.
Notes: Details for this filter:

FilterName:	CIRadialGradient
DisplayName English:	Radial Gradient
DisplayName German:	Radialer Verlauf
DisplayName French:	D√©grad√© radial
DisplayName Italian:	Gradiente radiale
DisplayName Spanish:	Degradado radial

Categories:

- CICategoryGradient: Gradient

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputCenter: Center

- inputRadius0: Radius 1

- inputRadius1: Radius 2

- inputColor0: Color 1

- inputColor1: Color 2

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- Tip of day: Gradients with CoreImage Filter

4.197.2 Methods

4.197.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.197.4 Properties

4.197.5 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Radial Gradient attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.197.6 AttributeinputColor0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Radial Gradient attribute.
Notes: This attribute should have this content:

Name:	inputColor0
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color 1
DisplayName German:	Farbe 1
DisplayName French:	Couleur 1
DisplayName Italian:	Colore 1
DisplayName Spanish:	Color 1
DefaultColor:	Red = 1, Green = 1, Blue = 1, Alpha = 1
IdentityNumber:	0

(Read only property)

4.197.7 AttributeinputColor1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Radial Gradient attribute.
Notes: This attribute should have this content:

Name:	inputColor1
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color 2
DisplayName German:	Farbe 2
DisplayName French:	Couleur 2
DisplayName Italian:	Colore 2
DisplayName Spanish:	Color 2
DefaultColor:	Red = 0, Green = 0, Blue = 0, Alpha = 1
IdentityNumber:	0

(Read only property)

4.197.8 AttributeinputRadius0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Radial Gradient attribute.
Notes: This attribute should have this content:

Name:	inputRadius0
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius 1
DisplayName German:	Radius 1
DisplayName French:	Rayon 1
DisplayName Italian:	Raggio 1
DisplayName Spanish:	Radio 1
DefaultNumber:	5
IdentityNumber:	0
SliderMaxNumber:	800
SliderMinNumber:	0

(Read only property)

4.197.9 AttributeinputRadius1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Radial Gradient attribute.
Notes: This attribute should have this content:

Name:	inputRadius1
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius 2
DisplayName German:	Radius 2
DisplayName French:	Rayon 2
DisplayName Italian:	Raggio 2
DisplayName Spanish:	Radio 2
DefaultNumber:	100
IdentityNumber:	0
SliderMaxNumber:	800
SliderMinNumber:	0

(Read only property)

4.197.10   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.197.11   inputColor0 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color 1
Notes:

Name:	inputColor0
Class:	CIColorMBS (CIColor)
DisplayName English:	Color 1
DisplayName German:	Farbe 1
DisplayName French:	Couleur 1
DisplayName Italian:	Colore 1
DisplayName Spanish:	Color 1
Type:	CIAttributeTypeColor

See AttributeinputColor0 for more details.
(Read and Write property)

4.197.12   inputColor1 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color 2
Notes:

Name:	inputColor1
Class:	CIColorMBS (CIColor)
DisplayName English:	Color 2
DisplayName German:	Farbe 2
DisplayName French:	Couleur 2
DisplayName Italian:	Colore 2
DisplayName Spanish:	Color 2
Type:	CIAttributeTypeColor

See AttributeinputColor1 for more details.
(Read and Write property)

4.197.13   inputRadius0 as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius 1
Notes:

Name:	inputRadius0
Class:	double (NSNumber)
DisplayName English:	Radius 1
DisplayName German:	Radius 1
DisplayName French:	Rayon 1
DisplayName Italian:	Raggio 1
DisplayName Spanish:	Radio 1
Type:	CIAttributeTypeDistance

See AttributeinputRadius0 for more details.
(Read and Write property)

4.197.14   inputRadius1 as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius 2
Notes:

See AttributeinputRadius1 for more details.
(Read and Write property)

Name:	inputRadius1
Class:	double (NSNumber)
DisplayName English:	Radius 2
DisplayName German:	Radius 2
DisplayName French:	Rayon 2
DisplayName Italian:	Raggio 2
DisplayName Spanish:	Radio 2
Type:	CIAttributeTypeDistance

4.198   class CIFilterRandomGeneratorMBS

4.198.1   class CIFilterRandomGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Random Generator filter.
Notes: Details for this filter:

FilterName:	CIRandomGenerator
DisplayName English:	Random Generator
DisplayName German:	Zufallsmuster
DisplayName French:	G√©n√©rateur al√©atoire
DisplayName Italian:	Generatore casuale
DisplayName Spanish:	Generador aleatorio

Categories:

- CICategoryGenerator: Generator

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.198.2   Methods

4.198.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.199   class CIFilterRippleTransitionMBS

4.199.1   class CIFilterRippleTransitionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Ripple filter.
Notes: Details for this filter:

FilterName:	CIRippleTransition
DisplayName English:	Ripple
DisplayName German:	Wellen
DisplayName French:	Ondulation
DisplayName Italian:	Increspatura
DisplayName Spanish:	Ondas

Categories:

- CICategoryTransition: Transition

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTargetImage: Target Image

- inputShadingImage: Shading Image

- inputCenter: Center

- inputExtent: Extent

- inputTime: Time

- inputWidth: Width

- inputScale: Scale

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.199.2 Methods

4.199.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.199.4 Properties

4.199.5 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Ripple attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.199.6   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Ripple attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 300 300]
IdentityVector:	n/a

(Read only property)

4.199.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Ripple attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.199.8 AttributeinputScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Ripple attribute.
Notes: This attribute should have this content:

Name:	inputScale
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
DefaultNumber:	50
IdentityNumber:	0
MaxNumber:	0
MinNumber:	-50
SliderMaxNumber:	50
SliderMinNumber:	-50

(Read only property)

4.199.9 AttributeinputShadingImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Ripple attribute.
Notes: This attribute should have this content:

Name:	inputShadingImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Shading Image
DisplayName German:	Bild schattieren
DisplayName French:	Image d‚Äôombrage
DisplayName Italian:	Immagine ombreggiatura
DisplayName Spanish:	Imagen de sombra
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.199.10   AttributeinputTargetImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Ripple attribute.
Notes: This attribute should have this content:

Name:	inputTargetImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.199.11   AttributeinputTime as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Ripple attribute.
Notes: This attribute should have this content:

(Read only property)

4.199.12   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Ripple attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputTime
Class:	double
Type:	CIAttributeTypeTime
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	100
IdentityNumber:	0
MaxNumber:	0
MinNumber:	1
SliderMaxNumber:	300
SliderMinNumber:	10

4.199.13   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

4.199.14   inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.199.15   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.199.16   inputScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale
Notes:

Name:	inputScale
Class:	double (NSNumber)
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
Type:	CIAttributeTypeScalar

See AttributeinputScale for more details.
(Read and Write property)

4.199.17   inputShadingImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Shading Image
Notes:

Name:	inputShadingImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Shading Image
DisplayName German:	Bild schattieren
DisplayName French:	Image d‚Äôombrage
DisplayName Italian:	Immagine ombreggiatura
DisplayName Spanish:	Imagen de sombra
Type:	CIAttributeTypeImage

See AttributeinputShadingImage for more details.
(Read and Write property)

4.199.18   inputTargetImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Target Image
Notes:

Name:	inputTargetImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
Type:	CIAttributeTypeImage

See AttributeinputTargetImage for more details.
(Read and Write property)

4.199.19   inputTime as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Time
Notes:

Name:	inputTime
Class:	double (NSNumber)
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
Type:	CIAttributeTypeTime

See AttributeinputTime for more details.
(Read and Write property)

4.199.20   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

See AttributeinputWidth for more details.
(Read and Write property)

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

4.200   class CIFilterRoundedRectangleGeneratorMBS

4.200.1   class CIFilterRoundedRectangleGeneratorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Rounded Rectangle Generator filter.
Notes: Details for this filter:

FilterName:	CIRoundedRectangleGenerator
DisplayName English:	Rounded Rectangle Generator
DisplayName German:	Abgerundetes Rechteck-Generator
DisplayName French:	G√©n√©rateur de rectangle aux angles arrondis
DisplayName Italian:	Generatore rettangolo arrotondato
DisplayName Spanish:	Generador de rect√°ngulos redondeados

Categories:

- CICategoryGenerator: Generator

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputExtent: Extent

- inputRadius: Radius

- inputColor: Color

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.200.2 Methods

4.200.3 Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.200.4 Properties

4.200.5 AttributeinputColor as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Rounded Rectangle Generator attribute.
Notes: This attribute should have this content:

Name:	inputColor
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
DefaultColor:	Red = 1, Green = 1, Blue = 1, Alpha = 1
IdentityNumber:	0

(Read only property)

4.200.6 AttributeinputExtent as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Rounded Rectangle Generator attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 100 100]
IdentityVector:	n/a

4.200.7   AttributeinputRadius as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Rounded Rectangle Generator attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	10
IdentityNumber:	0
SliderMaxNumber:	100
SliderMinNumber:	0

(Read only property)

4.200.8   inputColor as CIColorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Color
Notes:

See AttributeinputColor for more details.
(Read and Write property)

Name:	inputColor
Class:	CIColorMBS (CIColor)
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
Type:	CIAttributeTypeColor

4.200.9   inputExtent as CIVectorMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.200.10   inputRadius as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.

(Read and Write property)

4.201 class CIFilterRowAverageMBS

4.201.1 class CIFilterRowAverageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Row Average filter.
Notes: Details for this filter:

FilterName:	CIRowAverage
DisplayName English:	Row Average
DisplayName German:	Zeilendurchschnitt
DisplayName French:	Moyenne de rang√©es
DisplayName Italian:	Media riga
DisplayName Spanish:	Media de la fila

Categories:

- CICategoryReduction: Reduction

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputExtent: Extent

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.201.2   Methods

4.201.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.201.4   Properties

4.201.5   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Row Average attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 640 80]
IdentityVector:	n/a

(Read only property)

4.201.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Row Average attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.201.7   inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.201.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.202 class CIFilterSaliencyMapFilterMBS

4.202.1 class CIFilterSaliencyMapFilterMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Saliency Map Filter filter.
Notes: Details for this filter:

FilterName:	CISaliencyMapFilter
DisplayName English:	Saliency Map Filter
DisplayName German:	Salienzkartenfilter
DisplayName French:	Filtre de carte de saillance
DisplayName Italian:	Filtro mappa di salienza
DisplayName Spanish:	Filtro de mapa de notabilidad

Categories:

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryStylize: Stylize

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Xojo Plugins, version 23.0pr5

4.202.2   Methods

4.202.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.202.4   Properties

4.202.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Saliency Map Filter attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.202.6   inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.203   class CIFilterSampleNearestMBS

4.203.1   class CIFilterSampleNearestMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Sample Nearest filter.
Notes: Details for this filter:

FilterName:	CISampleNearest
DisplayName English:	Sample Nearest
DisplayName German:	Beispiel f√°r Modus basierend auf Objektn√§he
DisplayName French:	√âchantillonnage au plus proche
DisplayName Italian:	Campiona elemento pi√ vicino
DisplayName Spanish:	Muestra de lo m√°s cercano

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.203.2   Methods

4.203.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.203.4 Properties

4.203.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sample Nearest attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.203.6 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.204 class CIFilterSaturationBlendModeMBS

4.204.1 class CIFilterSaturationBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Saturation Blend Mode filter.
Notes: Details for this filter:

FilterName:	CISaturationBlendMode
DisplayName English:	Saturation Blend Mode
DisplayName German:	Mischmethode ‚ÄûS√§ttigung‚Äú
DisplayName French:	Mode de fusion Saturation
DisplayName Italian:	Modalit√† sfumatura saturazione
DisplayName Spanish:	Modo de mezcla de saturaci√n

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.204.2   Methods

4.204.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.204.4   Properties

4.204.5   AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Saturation Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.204.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Saturation Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.204.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.204.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.205 class CIFilterScreenBlendModeMBS

4.205.1 class CIFilterScreenBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Screen Blend Mode filter.
Notes: Details for this filter:

FilterName:	CIScreenBlendMode
DisplayName English:	Screen Blend Mode
DisplayName German:	Mischmethode ‚ÄûBlende‚Äú
DisplayName French:	Mode de fusion √âcran
DisplayName Italian:	Modalit√† sfumatura schermo
DisplayName Spanish:	Modo de mezcla de pantalla

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.205.2   Methods

4.205.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.205.4   Properties

4.205.5   AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Screen Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d,Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.205.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Screen Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.205.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.205.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.206 class CIFilterSepiaToneMBS

4.206.1 class CIFilterSepiaToneMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Sepia Tone filter.
Notes: Details for this filter:

FilterName:	CISepiaTone
DisplayName English:	Sepia Tone
DisplayName German:	Sepia-Farbt√ne
DisplayName French:	Ton s√©pia
DisplayName Italian:	Tonalit√† seppia
DisplayName Spanish:	Tono sepia

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

- CICategoryXMPSerializable: CICategoryXMPSerializable

Input:

- inputImage: Image

- inputIntensity: Intensity

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.206.2   Methods

4.206.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.206.4   Properties

4.206.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sepia Tone attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.206.6   AttributeinputIntensity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sepia Tone attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputIntensity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
DefaultNumber:	1
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.206.7   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.206.8   inputIntensity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Intensity
Notes:

See AttributeinputIntensity for more details.
(Read and Write property)

Name:	inputIntensity
Class:	double (NSNumber)
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
Type:	CIAttributeTypeScalar

4.207 class CIFilterShadedMaterialMBS

4.207.1 class CIFilterShadedMaterialMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Shaded Material filter.
Notes: Details for this filter:

FilterName:	CIShadedMaterial
DisplayName English:	Shaded Material
DisplayName German:	Schattiertes Material
DisplayName French:	Mat√©riau ombr√©
DisplayName Italian:	Materiale ombreggiato
DisplayName Spanish:	Material sombreado

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputShadingImage: Shading Image

- inputScale: Scale

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.207.2　Methods

4.207.3　Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.207.4　Properties

4.207.5　AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Shaded Material attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.207.6　AttributeinputScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Shaded Material attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputScale
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
DefaultNumber:	10
IdentityNumber:	0
SliderMaxNumber:	200
SliderMinNumber:	0.5

4.207.7 AttributeinputShadingImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Shaded Material attribute.
Notes: This attribute should have this content:

Name:	inputShadingImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Shading Image
DisplayName German:	Bild schattieren
DisplayName French:	Image d‚Äôombrage
DisplayName Italian:	Immagine ombreggiatura
DisplayName Spanish:	Imagen de sombra
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.207.8 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.207.9   inputScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale
Notes:

Name:	inputScale
Class:	double (NSNumber)
DisplayName English:	Scale
DisplayName German:	Skalierung
DisplayName French:	√âchelle
DisplayName Italian:	Scala
DisplayName Spanish:	Escala
Type:	CIAttributeTypeDistance

See AttributeinputScale for more details.
(Read and Write property)

4.207.10   inputShadingImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Shading Image
Notes:

Name:	inputShadingImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Shading Image
DisplayName German:	Bild schattieren
DisplayName French:	Image d‚Äôombrage
DisplayName Italian:	Immagine ombreggiatura
DisplayName Spanish:	Imagen de sombra
Type:	CIAttributeTypeImage

See AttributeinputShadingImage for more details.
(Read and Write property)

4.208   class CIFilterShapeMBS

4.208.1   class CIFilterShapeMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: A class to represent a filer shape in Xojo.
Blog Entries

- MBS Real Studio Plugins, version 12.1pr5

4.208.2   Methods

4.208.3   Constructor(cgrect as CGRectMBS)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Create a shape representing the smallest integral rect containing 'cgrect'.
See also:

- 4.208.4 Constructor(Handle as Integer)   1186

4.208.4   Constructor(Handle as Integer)

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: Initializes object with given object reference.
Notes: ref should be a CIFilterShape* and the object is retained.
Raises UnsupportedOperationException if object is not a CIFilterShape.
See also:

- 4.208.3 Constructor(cgrect as CGRectMBS)   1186

4.208.5   copy as CIFilterShapeMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Creates a copy of the filter shape object.

4.208.6   InsetByX(x as Integer, y as Integer) as CIFilterShapeMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Create a shape representing the shape inset by 'delta'.

4.208.7 IntersectWith(s as CIFilterShapeMBS) as CIFilterShapeMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Create a shape representing the intersection of the shape and 's'.

4.208.8 IntersectWithRect(cgrect as CGRectMBS) as CIFilterShapeMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Create a shape representing the intersection of the shape and the smallest integral rect containing 'cgrect'.

4.208.9 shapeWithRect(r as CGRectMBS) as CIFilterShapeMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Creates a filter shape object and initializes it with a rectangle.
Notes: R: A rectangle. The filter shape object will contain the smallest integral rectangle specified by this argument.

4.208.10 TransformBy(CGAffineTransform as NSAffineTransformMBS, flag as boolean) as CIFilterShapeMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Create a shape from the result of transforming the shape by CGAffineTransform.
Notes: If flag is false the new shape will contain all pixels in the transformed shape (and possibly some outside the transformed shape).
If flag is false the new shape will contain a subset of the pixels in the transformed shape (but none of those outside the transformed shape).

4.208.11 UnionWith(s as CIFilterShapeMBS) as CIFilterShapeMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Create a shape representing the union of the shape and 's'.

4.208.12 UnionWithRect(cgrect as CGRectMBS) as CIFilterShapeMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Create a shape representing the union of the shape and the smallest integral rect containing 'cgrect'.

4.208.13 Properties

4.208.14 description as String

Plugin Version: 9.7, Platform: macOS, Targets: All.

Function: Returns the textual description for this filter shape.
Notes: (Read only property)

4.208.15 extent as CGRectMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The extent of the filter shape.
Notes: Extent is a rectangle that describes the filter shape in the working coordinate space with a fixed area.
Available in OS X v10.11 and later.
(Read only property)

4.208.16 Handle as Integer

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: The handle to the internal used CIFilterShape reference.
Notes: (Read only property)

4.209 class CIFilterSharpenLuminanceMBS

4.209.1 class CIFilterSharpenLuminanceMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Sharpen Luminance filter.
Notes: Details for this filter:

FilterName:	CISharpenLuminance
DisplayName English:	Sharpen Luminance
DisplayName German:	Luminanz scharfzeichnen
DisplayName French:	Renforcer la luminance
DisplayName Italian:	Luminosit√† nitidezza
DisplayName Spanish:	Agudizar luminancia

Categories:

- CICategorySharpen: Sharpen

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputSharpness: Sharpness

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.209.2   Methods

4.209.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.209.4   Properties

4.209.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sharpen Luminance attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.209.6   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sharpen Luminance attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	1.69
IdentityNumber:	0
SliderMaxNumber:	20
SliderMinNumber:	0

4.209.7 AttributeinputSharpness as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sharpen Luminance attribute.
Notes: This attribute should have this content:

Name:	inputSharpness
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
DefaultNumber:	0.4
IdentityNumber:	0
SliderMaxNumber:	2
SliderMinNumber:	0

(Read only property)

4.209.8 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

(Read and Write property)

4.209.9   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeScalar

See AttributeinputRadius for more details.
(Read and Write property)

4.209.10   inputSharpness as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Sharpness
Notes:

See AttributeinputSharpness for more details.
(Read and Write property)

Name:	inputSharpness
Class:	double (NSNumber)
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
Type:	CIAttributeTypeScalar

4.210   class CIFilterSixfoldReflectedTileMBS

4.210.1   class CIFilterSixfoldReflectedTileMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Sixfold Reflected Tile filter.
Notes: Details for this filter:

FilterName:	CISixfoldReflectedTile
DisplayName English:	Sixfold Reflected Tile
DisplayName German:	6-fach reflektierte Kachel
DisplayName French:	Mosa√Øque r√©fl√©chie 6 fois
DisplayName Italian:	Mosaico riflesso in sei direzioni
DisplayName Spanish:	Mosaico reflejado seis veces

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputAngle: Angle

- inputWidth: Width

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.210.2 Methods

4.210.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.210.4 Properties

4.210.5 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sixfold Reflected Tile attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.210.6 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sixfold Reflected Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.210.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sixfold Reflected Tile attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.210.8   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sixfold Reflected Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	100
IdentityNumber:	100
SliderMaxNumber:	200
SliderMinNumber:	1

4.210.9 inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.210.10 inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

4.210.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.210.12   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.211 class CIFilterSixfoldRotatedTileMBS

4.211.1 class CIFilterSixfoldRotatedTileMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Sixfold Rotated Tile filter.
Notes: Details for this filter:

FilterName:	CISixfoldRotatedTile
DisplayName English:	Sixfold Rotated Tile
DisplayName German:	6-fach gedrehte Kachel
DisplayName French:	Mosa√Øque pivot√©e 6 fois
DisplayName Italian:	Mosaico ruotato in sei direzioni
DisplayName Spanish:	Mosaico rotado seis veces

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputAngle: Angle

- inputWidth: Width

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.211.2 Methods

4.211.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.211.4 Properties

4.211.5 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sixfold Rotated Tile attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.211.6 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sixfold Rotated Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.211.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sixfold Rotated Tile attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.211.8   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sixfold Rotated Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	100
IdentityNumber:	100
SliderMaxNumber:	200
SliderMinNumber:	1

4.211.9   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.211.10   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

Name: inputCenter
Class: CIVectorMBS (CIVector)
DisplayName English: Center
DisplayName German: Mitte
DisplayName French: Centre
DisplayName Italian: Centro
DisplayName Spanish: Centro
Type: CIAttributeTypePosition

4.211.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name: inputImage
Class: CIImageMBS (CIImage)
DisplayName English: Image
DisplayName German: Bild
DisplayName French: Image
DisplayName Italian: Immagine
DisplayName Spanish: Imagen
Type: CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.211.12   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name: inputWidth
Class: double (NSNumber)
DisplayName English: Width
DisplayName German: Breite
DisplayName French: Largeur
DisplayName Italian: Larghezza
DisplayName Spanish: Anchura
Type: CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.212   class CIFilterSmoothLinearGradientMBS

4.212.1   class CIFilterSmoothLinearGradientMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Smooth Linear Gradient filter.
Notes: Details for this filter:

FilterName:	CISmoothLinearGradient
DisplayName English:	Smooth Linear Gradient
DisplayName German:	Glatter linearer Verlauf
DisplayName French:	D√©grad√© lin√©aire lisse
DisplayName Italian:	Gradiente lineare graduale
DisplayName Spanish:	Suavizar el degradado lineal

Categories:

- CICategoryGradient: Gradient

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputPoint0: Point 0

- inputPoint1: Point 1

- inputColor0: Color 1

- inputColor1: Color 2

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- Tip of day: Gradients with CoreImage Filter

4.212.2   Methods

4.212.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.212.4   Properties

4.212.5   AttributeinputColor0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Smooth Linear Gradient attribute.
Notes: This attribute should have this content:

Name:	inputColor0
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color 1
DisplayName German:	Farbe 1
DisplayName French:	Couleur 1
DisplayName Italian:	Colore 1
DisplayName Spanish:	Color 1
DefaultColor:	Red = 1, Green = 1, Blue = 1, Alpha = 1
IdentityNumber:	0

(Read only property)

4.212.6   AttributeinputColor1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Smooth Linear Gradient attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputColor1
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color 2
DisplayName German:	Farbe 2
DisplayName French:	Couleur 2
DisplayName Italian:	Colore 2
DisplayName Spanish:	Color 2
DefaultColor:	Red = 0, Green = 0, Blue = 0, Alpha = 1
IdentityNumber:	0

4.212.7   AttributeinputPoint0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Smooth Linear Gradient attribute.
Notes: This attribute should have this content:

Name:	inputPoint0
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Point 0
DisplayName German:	Punkt 0
DisplayName French:	Point¬†0
DisplayName Italian:	Punto 0
DisplayName Spanish:	Punto 0
DefaultVector:	[0 0]
IdentityVector:	n/a

(Read only property)

4.212.8   AttributeinputPoint1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Smooth Linear Gradient attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputPoint1
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Point 1
DisplayName German:	Punkt 1
DisplayName French:	Point 1
DisplayName Italian:	Punto 1
DisplayName Spanish:	Punto 1
DefaultVector:	[200 200]
IdentityVector:	n/a

4.212.9   inputColor0 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color 1
Notes:

Name:	inputColor0
Class:	CIColorMBS (CIColor)
DisplayName English:	Color 1
DisplayName German:	Farbe 1
DisplayName French:	Couleur 1
DisplayName Italian:	Colore 1
DisplayName Spanish:	Color 1
Type:	CIAttributeTypeColor

See AttributeinputColor0 for more details.
(Read and Write property)

4.212.10   inputColor1 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color 2
Notes:

See AttributeinputColor1 for more details.
(Read and Write property)

Name:	inputColor1
Class:	CIColorMBS (CIColor)
DisplayName English:	Color 2
DisplayName German:	Farbe 2
DisplayName French:	Couleur 2
DisplayName Italian:	Colore 2
DisplayName Spanish:	Color 2
Type:	CIAttributeTypeColor

4.212.11   inputPoint0 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Point 0
Notes:

Name:	inputPoint0
Class:	CIVectorMBS (CIVector)
DisplayName English:	Point 0
DisplayName German:	Punkt 0
DisplayName French:	Point¬†0
DisplayName Italian:	Punto 0
DisplayName Spanish:	Punto 0
Type:	CIAttributeTypePosition

See AttributeinputPoint0 for more details.
(Read and Write property)

4.212.12   inputPoint1 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Point 1
Notes:

Name:	inputPoint1
Class:	CIVectorMBS (CIVector)
DisplayName English:	Point 1
DisplayName German:	Punkt 1
DisplayName French:	Point 1
DisplayName Italian:	Punto 1
DisplayName Spanish:	Punto 1
Type:	CIAttributeTypePosition

See AttributeinputPoint1 for more details.
(Read and Write property)

4.213   class CIFilterSoftLightBlendModeMBS

4.213.1   class CIFilterSoftLightBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Soft Light Blend Mode filter.
Notes: Details for this filter:

FilterName:	CISoftLightBlendMode
DisplayName English:	Soft Light Blend Mode
DisplayName German:	Mischmethode ‚ÄûWeiches Licht‚Äú
DisplayName French:	Mode de fusion Lumi√®re tamis√©e
DisplayName Italian:	Modalit√† sfumatura luce soffusa
DisplayName Spanish:	Modo de mezcla por luz indirecta

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.213.2 Methods

4.213.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.213.4 Properties

4.213.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Soft Light Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.213.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Soft Light Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.213.7　inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.213.8　inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.214   class CIFilterSourceAtopCompositingMBS

4.214.1   class CIFilterSourceAtopCompositingMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Source Atop filter.
Notes: Details for this filter:

FilterName:	CISourceAtopCompositing
DisplayName English:	Source Atop
DisplayName German:	Quelle obenauf
DisplayName French:	Source dessus
DisplayName Italian:	Sorgente sopra
DisplayName Spanish:	Sobre la fuente

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.214.2 Methods

4.214.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.214.4 Properties

4.214.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Source Atop attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.214.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Source Atop attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.214.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.214.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.215   class CIFilterSourceInCompositingMBS

4.215.1   class CIFilterSourceInCompositingMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Source In filter.
Notes: Details for this filter:

FilterName:	CISourceInCompositing
DisplayName English:	Source In
DisplayName German:	Quelle innen
DisplayName French:	Source √† l‚Äôint√©rieur
DisplayName Italian:	Sorgente ingresso
DisplayName Spanish:	Desde dentro de la fuente

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.215.2 Methods

4.215.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.215.4 Properties

4.215.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Source In attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.215.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Source In attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.215.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.215.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.216 class CIFilterSourceOutCompositingMBS

4.216.1 class CIFilterSourceOutCompositingMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Source Out filter.
Notes: Details for this filter:

FilterName:	CISourceOutCompositing
DisplayName English:	Source Out
DisplayName German:	Quelle au√üen
DisplayName French:	Source √† l,Äôext√©rieur
DisplayName Italian:	Sorgente uscita
DisplayName Spanish:	Desde fuera de la fuente

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.216.2 Methods

4.216.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.216.4 Properties

4.216.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Source Out attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.216.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Source Out attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.216.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.216.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.217   class CIFilterSourceOverCompositingMBS

4.217.1   class CIFilterSourceOverCompositingMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Source Over filter.
Notes: Details for this filter:

FilterName:	CISourceOverCompositing
DisplayName English:	Source Over
DisplayName German:	Quelle √ºber
DisplayName French:	Source au-dessus
DisplayName Italian:	Sorgente sovrapposizione
DisplayName Spanish:	Alrededor de la fuente

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.217.2 Methods

4.217.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.217.4 Properties

4.217.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Source Over attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.217.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Source Over attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.217.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.217.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.218 class CIFilterSpotColorMBS

4.218.1 class CIFilterSpotColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Spot Color filter.
Notes: Details for this filter:

FilterName:	CISpotColor
DisplayName English:	Spot Color
DisplayName German:	Spot-Farbe
DisplayName French:	Couleur de la tache
DisplayName Italian:	Colore tinta piatta
DisplayName Spanish:	Color del punto

Categories:

- CICategoryBuiltIn: Built-In

- CICategoryStillImage: Still Image

- CICategoryVideo: Video

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryStylize: Stylize

Input:

- inputImage: Image

- inputCenterColor1: Center Color 1

- inputReplacementColor1: Replacement Color 1

- inputCloseness1: Closeness 1

- inputContrast1: Contrast 1

- inputCenterColor2: Center Color 2

- inputReplacementColor2: Replacement Color 2

- inputCloseness2: Closeness 2

- inputContrast2: Contrast 2

- inputCenterColor3: Center Color 3

- inputReplacementColor3: Replacement Color 3

- inputCloseness3: Closeness 3

- inputContrast3: Contrast 3

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.218.2 Methods

4.218.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.218.4 Properties

4.218.5 AttributeinputCenterColor1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Color attribute.
Notes: This attribute should have this content:

(Read only property)

4.218.6 AttributeinputCenterColor2 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Color attribute.
Notes: This attribute should have this content:

Name:	inputCenterColor1
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Center Color 1
DisplayName German:	Mittenfarbe 1
DisplayName French:	Couleur centrale 1
DisplayName Italian:	Colore centrale 1
DisplayName Spanish:	Color del centro 1
DefaultColor:	Red = 0.0784, Green = 0.0627, Blue = 0.0706, Alpha = 1
IdentityNumber:	0

Name:	inputCenterColor2
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Center Color 2
DisplayName German:	Mittenfarbe 2
DisplayName French:	Couleur centrale 2
DisplayName Italian:	Colore centrale 2
DisplayName Spanish:	Color del centro 2
DefaultColor:	Red = 0.5255, Green = 0.3059, Blue = 0.3451, Alpha = 1
IdentityNumber:	0

(Read only property)

4.218.7 AttributeinputCenterColor3 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Color attribute.
Notes: This attribute should have this content:

Name:	inputCenterColor3
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Center Color 3
DisplayName German:	Mittenfarbe 3
DisplayName French:	Couleur centrale 3
DisplayName Italian:	Colore centrale 3
DisplayName Spanish:	Color del centro 3
DefaultColor:	Red = 0.9216, Green = 0.4549, Blue = 0.3333, Alpha = 1
IdentityNumber:	0

(Read only property)

4.218.8   AttributeinputCloseness1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Color attribute.
Notes: This attribute should have this content:

Name:	inputCloseness1
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Closeness 1
DisplayName German:	N√§he 1
DisplayName French:	Rapprochement 1
DisplayName Italian:	Distanza 1
DisplayName Spanish:	Acercamiento 1
DefaultNumber:	0.22
IdentityNumber:	0
SliderMaxNumber:	0.5
SliderMinNumber:	0

(Read only property)

4.218.9   AttributeinputCloseness2 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Color attribute.
Notes: This attribute should have this content:

(Read only property)

4.218.10   AttributeinputCloseness3 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Color attribute.
Notes: This attribute should have this content:

Name:	inputCloseness2
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Closeness 2
DisplayName German:	N√§he 2
DisplayName French:	Rapprochement 2
DisplayName Italian:	Distanza 2
DisplayName Spanish:	Acercamiento 2
DefaultNumber:	0.15
IdentityNumber:	0
SliderMaxNumber:	0.5
SliderMinNumber:	0

Name:	inputCloseness3
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Closeness 3
DisplayName German:	N√§he 3
DisplayName French:	Rapprochement 3
DisplayName Italian:	Distanza 3
DisplayName Spanish:	Acercamiento 3
DefaultNumber:	0.5
IdentityNumber:	0
SliderMaxNumber:	0.5
SliderMinNumber:	0

(Read only property)

4.218.11   AttributeinputContrast1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Color attribute.
Notes: This attribute should have this content:

(Read only property)

4.218.12   AttributeinputContrast2 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputContrast1
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Contrast 1
DisplayName German:	Kontrast 1
DisplayName French:	Contraste 1
DisplayName Italian:	Contrasto 1
DisplayName Spanish:	Contraste 1
DefaultNumber:	0.98
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

Function: Details about the Spot Color attribute.
Notes: This attribute should have this content:

Name:	inputContrast2
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Contrast 2
DisplayName German:	Kontrast 2
DisplayName French:	Contraste 2
DisplayName Italian:	Contrasto 2
DisplayName Spanish:	Contraste 2
DefaultNumber:	0.98
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.218.13   AttributeinputContrast3 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Color attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputContrast3
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Contrast 3
DisplayName German:	Kontrast 3
DisplayName French:	Contraste 3
DisplayName Italian:	Contrasto 3
DisplayName Spanish:	Contraste 3
DefaultNumber:	0.99
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.218.14 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Color attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.218.15 AttributeinputReplacementColor1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Color attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputReplacementColor1
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Replacement Color 1
DisplayName German:	Ersetzungsfarbe 1
DisplayName French:	Couleur de remplacement 1
DisplayName Italian:	Colore di sostituzione 1
DisplayName Spanish:	Color de reemplazo 1
DefaultColor:	Red = 0.4392, Green = 0.1922, Blue = 0.1961, Alpha = 1
IdentityNumber:	0

4.218.16 AttributeinputReplacementColor2 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Color attribute.
Notes: This attribute should have this content:

Name:	inputReplacementColor2
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Replacement Color 2
DisplayName German:	Ersetzungsfarbe 2
DisplayName French:	Couleur de remplacement 2
DisplayName Italian:	Colore di sostituzione 2
DisplayName Spanish:	Color de reemplazo 2
DefaultColor:	Red = 0.9137, Green = 0.5608, Blue = 0.5059, Alpha = 1
IdentityNumber:	0

(Read only property)

4.218.17 AttributeinputReplacementColor3 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Color attribute.
Notes: This attribute should have this content:

(Read only property)

Name: inputReplacementColor3
Class: CIColorMBS
Type: CIAttributeTypeColor
DisplayName English: Replacement Color 3
DisplayName German: Ersetzungsfarbe 3
DisplayName French: Couleur de remplacement 3
DisplayName Italian: Colore di sostituzione 3
DisplayName Spanish: Color de reemplazo 3
DefaultColor: Red = 0.9098, Green = 0.7529, Blue = 0.6078, Alpha = 1
IdentityNumber: 0

4.218.18   inputCenterColor1 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center Color 1
Notes:

Name: inputCenterColor1
Class: CIColorMBS (CIColor)
DisplayName English: Center Color 1
DisplayName German: Mittenfarbe 1
DisplayName French: Couleur centrale 1
DisplayName Italian: Colore centrale 1
DisplayName Spanish: Color del centro 1
Type: CIAttributeTypeColor

See AttributeinputCenterColor1 for more details.
(Read and Write property)

4.218.19   inputCenterColor2 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center Color 2
Notes:

See AttributeinputCenterColor2 for more details.
(Read and Write property)

Name:	inputCenterColor2
Class:	CIColorMBS (CIColor)
DisplayName English:	Center Color 2
DisplayName German:	Mittenfarbe 2
DisplayName French:	Couleur centrale 2
DisplayName Italian:	Colore centrale 2
DisplayName Spanish:	Color del centro 2
Type:	CIAttributeTypeColor

4.218.20   inputCenterColor3 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center Color 3
Notes:

Name:	inputCenterColor3
Class:	CIColorMBS (CIColor)
DisplayName English:	Center Color 3
DisplayName German:	Mittenfarbe 3
DisplayName French:	Couleur centrale 3
DisplayName Italian:	Colore centrale 3
DisplayName Spanish:	Color del centro 3
Type:	CIAttributeTypeColor

See AttributeinputCenterColor3 for more details.
(Read and Write property)

4.218.21   inputCloseness1 as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Closeness 1
Notes:

Name:	inputCloseness1
Class:	double (NSNumber)
DisplayName English:	Closeness 1
DisplayName German:	N√§he 1
DisplayName French:	Rapprochement 1
DisplayName Italian:	Distanza 1
DisplayName Spanish:	Acercamiento 1
Type:	CIAttributeTypeScalar

See AttributeinputCloseness1 for more details.
(Read and Write property)

4.218.22   inputCloseness2 as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Closeness 2
Notes:

Name:	inputCloseness2
Class:	double (NSNumber)
DisplayName English:	Closeness 2
DisplayName German:	N√§he 2
DisplayName French:	Rapprochement 2
DisplayName Italian:	Distanza 2
DisplayName Spanish:	Acercamiento 2
Type:	CIAttributeTypeScalar

See AttributeinputCloseness2 for more details.
(Read and Write property)

4.218.23   inputCloseness3 as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Closeness 3
Notes:

Name:	inputCloseness3
Class:	double (NSNumber)
DisplayName English:	Closeness 3
DisplayName German:	N√§he 3
DisplayName French:	Rapprochement 3
DisplayName Italian:	Distanza 3
DisplayName Spanish:	Acercamiento 3
Type:	CIAttributeTypeScalar

See AttributeinputCloseness3 for more details.
(Read and Write property)

4.218.24   inputContrast1 as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Contrast 1
Notes:

Name:	inputContrast1
Class:	double (NSNumber)
DisplayName English:	Contrast 1
DisplayName German:	Kontrast 1
DisplayName French:	Contraste 1
DisplayName Italian:	Contrasto 1
DisplayName Spanish:	Contraste 1
Type:	CIAttributeTypeScalar

See AttributeinputContrast1 for more details.
(Read and Write property)

4.218.25   inputContrast2 as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Contrast 2
Notes:

Name:	inputContrast2
Class:	double (NSNumber)
DisplayName English:	Contrast 2
DisplayName German:	Kontrast 2
DisplayName French:	Contraste 2
DisplayName Italian:	Contrasto 2
DisplayName Spanish:	Contraste 2
Type:	CIAttributeTypeScalar

See AttributeinputContrast2 for more details.
(Read and Write property)

4.218.26   inputContrast3 as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Contrast 3
Notes:

Name:	inputContrast3
Class:	double (NSNumber)
DisplayName English:	Contrast 3
DisplayName German:	Kontrast 3
DisplayName French:	Contraste 3
DisplayName Italian:	Contrasto 3
DisplayName Spanish:	Contraste 3
Type:	CIAttributeTypeScalar

See AttributeinputContrast3 for more details.
(Read and Write property)

4.218.27   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.218.28   inputReplacementColor1 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Replacement Color 1
Notes:

See AttributeinputReplacementColor1 for more details.
(Read and Write property)

Name:	inputReplacementColor1
Class:	CIColorMBS (CIColor)
DisplayName English:	Replacement Color 1
DisplayName German:	Ersetzungsfarbe 1
DisplayName French:	Couleur de remplacement 1
DisplayName Italian:	Colore di sostituzione 1
DisplayName Spanish:	Color de reemplazo 1
Type:	CIAttributeTypeColor

4.218.29   inputReplacementColor2 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Replacement Color 2
Notes:

Name:	inputReplacementColor2
Class:	CIColorMBS (CIColor)
DisplayName English:	Replacement Color 2
DisplayName German:	Ersetzungsfarbe 2
DisplayName French:	Couleur de remplacement 2
DisplayName Italian:	Colore di sostituzione 2
DisplayName Spanish:	Color de reemplazo 2
Type:	CIAttributeTypeColor

See AttributeinputReplacementColor2 for more details.
(Read and Write property)

4.218.30   inputReplacementColor3 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Replacement Color 3
Notes:

Name:	inputReplacementColor3
Class:	CIColorMBS (CIColor)
DisplayName English:	Replacement Color 3
DisplayName German:	Ersetzungsfarbe 3
DisplayName French:	Couleur de remplacement 3
DisplayName Italian:	Colore di sostituzione 3
DisplayName Spanish:	Color de reemplazo 3
Type:	CIAttributeTypeColor

See AttributeinputReplacementColor3 for more details.
(Read and Write property)

4.219   class CIFilterSpotLightMBS

4.219.1   class CIFilterSpotLightMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Spot Light filter.
Notes: Details for this filter:

FilterName:	CISpotLight
DisplayName English:	Spot Light
DisplayName German:	Rampenlicht
DisplayName French:	Phare
DisplayName Italian:	Luminosit√† tinta piatta
DisplayName Spanish:	Luz concentrada

Categories:

- CICategoryStylize: Stylize

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputLightPosition: Light Position

- inputLightPointsAt: Light Points At

- inputBrightness: Brightness

- inputConcentration: Concentration

- inputColor: Color

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.219.2   Methods

4.219.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.219.4   Properties

4.219.5   AttributeinputBrightness as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Light attribute.
Notes: This attribute should have this content:

Name:	inputBrightness
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Brightness
DisplayName German:	Helligkeit
DisplayName French:	Luminosit√©
DisplayName Italian:	Luminosit√†
DisplayName Spanish:	Brillo
DefaultNumber:	3
IdentityNumber:	1
SliderMaxNumber:	10
SliderMinNumber:	0

(Read only property)

4.219.6   AttributeinputColor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Light attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputColor
Class:	CIColorMBS
Type:	CIAttributeTypeOpaqueColor
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
DefaultColor:	Red = 1, Green = 1, Blue = 1, Alpha = 1
IdentityNumber:	0

4.219.7   AttributeinputConcentration as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Light attribute.
Notes: This attribute should have this content:

Name:	inputConcentration
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Concentration
DisplayName German:	Konzentration
DisplayName French:	Concentration
DisplayName Italian:	Concentrazione
DisplayName Spanish:	Concentraci√n
DefaultNumber:	0.1
IdentityNumber:	20
MaxNumber:	0
MinNumber:	0.001
SliderMaxNumber:	1.5
SliderMinNumber:	0.001

(Read only property)

4.219.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Light attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.219.9   AttributeinputLightPointsAt as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Light attribute.
Notes: This attribute should have this content:

Name:	inputLightPointsAt
Class:	CIVectorMBS
Type:	CIAttributeTypePosition3
DisplayName English:	Light Points At
DisplayName German:	Lichtpunkte bei
DisplayName French:	Points lumineux √†
DisplayName Italian:	Punti luce a
DisplayName Spanish:	El foco apunta a
DefaultVector:	[200 200 0]
IdentityVector:	n/a

(Read only property)

4.219.10   AttributeinputLightPosition as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Spot Light attribute.
Notes: This attribute should have this content:

Name:	inputLightPosition
Class:	CIVectorMBS
Type:	CIAttributeTypePosition3
DisplayName English:	Light Position
DisplayName German:	Lichtposition
DisplayName French:	Position de la lumi√®re
DisplayName Italian:	Posizione luce
DisplayName Spanish:	Posici√n de la luz
DefaultVector:	[400 600 150]
IdentityVector:	n/a

(Read only property)

4.219.11   inputBrightness as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Brightness
Notes:

Name:	inputBrightness
Class:	double (NSNumber)
DisplayName English:	Brightness
DisplayName German:	Helligkeit
DisplayName French:	Luminosit√©
DisplayName Italian:	Luminosit√†
DisplayName Spanish:	Brillo
Type:	CIAttributeTypeDistance

See AttributeinputBrightness for more details.
(Read and Write property)

4.219.12   inputColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color
Notes:

See AttributeinputColor for more details.
(Read and Write property)

Name:	inputColor
Class:	CIColorMBS (CIColor)
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
Type:	CIAttributeTypeOpaqueColor

4.219.13   inputConcentration as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Concentration
Notes:

Name:	inputConcentration
Class:	double (NSNumber)
DisplayName English:	Concentration
DisplayName German:	Konzentration
DisplayName French:	Concentration
DisplayName Italian:	Concentrazione
DisplayName Spanish:	Concentraci√n
Type:	CIAttributeTypeScalar

See AttributeinputConcentration for more details.
(Read and Write property)

4.219.14   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.219.15   inputLightPointsAt as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Light Points At
Notes:

Name:	inputLightPointsAt
Class:	CIVectorMBS (CIVector)
DisplayName English:	Light Points At
DisplayName German:	Lichtpunkte bei
DisplayName French:	Points lumineux √†
DisplayName Italian:	Punti luce a
DisplayName Spanish:	El foco apunta a
Type:	CIAttributeTypePosition3

See AttributeinputLightPointsAt for more details.
(Read and Write property)

4.219.16   inputLightPosition as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Light Position
Notes:

Name:	inputLightPosition
Class:	CIVectorMBS (CIVector)
DisplayName English:	Light Position
DisplayName German:	Lichtposition
DisplayName French:	Position de la lumi√®re
DisplayName Italian:	Posizione luce
DisplayName Spanish:	Posici√n de la luz
Type:	CIAttributeTypePosition3

See AttributeinputLightPosition for more details.
(Read and Write property)

4.220 class CIFilterSRGBToneCurveToLinearMBS

4.220.1 class CIFilterSRGBToneCurveToLinearMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage sRGB Tone Curve to Linear filter.
Notes: Details for this filter:

FilterName:	CISRGBToneCurveToLinear
DisplayName English:	sRGB Tone Curve to Linear
DisplayName German:	sRGB-Farbtonkurve in eine lineare Farbtonkurve
DisplayName French:	Courbe tonale sRGB vers lin√©aire
DisplayName Italian:	Da curva tonale sRGB a lineare
DisplayName Spanish:	Curva tonal de sRGB a lineal

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.220.2 Methods

4.220.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.220.4 Properties

4.220.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the sRGB Tone Curve to Linear attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.220.6 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.221 class CIFilterStarShineGeneratorMBS

4.221.1 class CIFilterStarShineGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Star Shine filter.
Notes: Details for this filter:

FilterName:	CIStarShineGenerator
DisplayName English:	Star Shine
DisplayName German:	Sternenlicht
DisplayName French:	Brillance d‚Äô√©toile
DisplayName Italian:	Stella luminosa
DisplayName Spanish:	Brillo estrellado

Categories:

- CICategoryGenerator: Generator

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputCenter: Center

- inputColor: Color

- inputRadius: Radius

- inputCrossScale: Cross Scale

- inputCrossAngle: Cross Angle

- inputCrossOpacity: Cross Opacity

- inputCrossWidth: Cross Width

- inputEpsilon: Epsilon

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.221.2   Methods

4.221.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.221.4   Properties

4.221.5   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Star Shine attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.221.6 AttributeinputColor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Star Shine attribute.
Notes: This attribute should have this content:

Name:	inputColor
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
DefaultColor:	Red = 1, Green = 0.8, Blue = 0.6, Alpha = 1
IdentityNumber:	0

(Read only property)

4.221.7 AttributeinputCrossAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Star Shine attribute.
Notes: This attribute should have this content:

Name:	inputCrossAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Cross Angle
DisplayName German:	Cross-Winkel
DisplayName French:	Angle crois√©
DisplayName Italian:	Angolo incrociato
DisplayName Spanish:	√Ångulo cruzado
DefaultNumber:	0.6
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.221.8   AttributeinputCrossOpacity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Star Shine attribute.
Notes: This attribute should have this content:

Name:	inputCrossOpacity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Cross Opacity
DisplayName German:	Cross-Deckkraft
DisplayName French:	Opacit√© crois√©e
DisplayName Italian:	Opacit√† incrociata
DisplayName Spanish:	Opacidad cruzada
DefaultNumber:	-2
IdentityNumber:	-2
MaxNumber:	0
MinNumber:	-8
SliderMaxNumber:	0
SliderMinNumber:	-8

(Read only property)

4.221.9   AttributeinputCrossScale as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Star Shine attribute.
Notes: This attribute should have this content:

(Read only property)

4.221.10   AttributeinputCrossWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Star Shine attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCrossScale
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Cross Scale
DisplayName German:	Cross-Skalierung
DisplayName French:	√âchelle crois√©e
DisplayName Italian:	Scala incrociata
DisplayName Spanish:	Escala cruzada
DefaultNumber:	15
IdentityNumber:	15
SliderMaxNumber:	100
SliderMinNumber:	0

Name:	inputCrossWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Cross Width
DisplayName German:	Cross-Breite
DisplayName French:	Largeur crois√©e
DisplayName Italian:	Larghezza incrociata
DisplayName Spanish:	Anchura cruzada
DefaultNumber:	2.5
IdentityNumber:	0
SliderMaxNumber:	10
SliderMinNumber:	0.5

4.221.11 AttributeinputEpsilon as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Star Shine attribute.
Notes: This attribute should have this content:

(Read only property)

4.221.12 AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Star Shine attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputEpsilon
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Epsilon
DisplayName German:	Epsilon
DisplayName French:	Epsilon
DisplayName Italian:	Ipsilon
DisplayName Spanish:	√âpsilon
DefaultNumber:	-2
IdentityNumber:	-2
MaxNumber:	0
MinNumber:	-8
SliderMaxNumber:	0
SliderMinNumber:	-8

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	50
IdentityNumber:	0
SliderMaxNumber:	300
SliderMinNumber:	0

4.221.13   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

4.221.14   inputColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

Function: The attribute Color
Notes:

Name:	inputColor
Class:	CIColorMBS (CIColor)
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
Type:	CIAttributeTypeColor

See AttributeinputColor for more details.
(Read and Write property)

4.221.15   inputCrossAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Cross Angle
Notes:

Name:	inputCrossAngle
Class:	double (NSNumber)
DisplayName English:	Cross Angle
DisplayName German:	Cross-Winkel
DisplayName French:	Angle crois√©
DisplayName Italian:	Angolo incrociato
DisplayName Spanish:	√Ångulo cruzado
Type:	CIAttributeTypeAngle

See AttributeinputCrossAngle for more details.
(Read and Write property)

4.221.16   inputCrossOpacity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Cross Opacity
Notes:

Name:	inputCrossOpacity
Class:	double (NSNumber)
DisplayName English:	Cross Opacity
DisplayName German:	Cross-Deckkraft
DisplayName French:	Opacit√© crois√©e
DisplayName Italian:	Opacit√† incrociata
DisplayName Spanish:	Opacidad cruzada
Type:	CIAttributeTypeScalar

See AttributeinputCrossOpacity for more details.
(Read and Write property)

4.221.17   inputCrossScale as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Cross Scale
Notes:

Name:	inputCrossScale
Class:	double (NSNumber)
DisplayName English:	Cross Scale
DisplayName German:	Cross-Skalierung
DisplayName French:	√âchelle crois√©e
DisplayName Italian:	Scala incrociata
DisplayName Spanish:	Escala cruzada
Type:	CIAttributeTypeScalar

See AttributeinputCrossScale for more details.
(Read and Write property)

4.221.18   inputCrossWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Cross Width
Notes:

Name:	inputCrossWidth
Class:	double (NSNumber)
DisplayName English:	Cross Width
DisplayName German:	Cross-Breite
DisplayName French:	Largeur crois√©e
DisplayName Italian:	Larghezza incrociata
DisplayName Spanish:	Anchura cruzada
Type:	CIAttributeTypeDistance

See AttributeinputCrossWidth for more details.
(Read and Write property)

4.221.19   inputEpsilon as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Epsilon
Notes:

Name:	inputEpsilon
Class:	double (NSNumber)
DisplayName English:	Epsilon
DisplayName German:	Epsilon
DisplayName French:	Epsilon
DisplayName Italian:	Ipsilon
DisplayName Spanish:	√âpsilon
Type:	CIAttributeTypeScalar

See AttributeinputEpsilon for more details.
(Read and Write property)

4.221.20   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

4.222 class CIFilterStraightenFilterMBS

4.222.1 class CIFilterStraightenFilterMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Straighten filter.
Notes: Details for this filter:

FilterName:	CIStraightenFilter
DisplayName English:	Straighten
DisplayName German:	Begradigen
DisplayName French:	Redresser
DisplayName Italian:	Raddrizza
DisplayName Spanish:	Enderezar

Categories:

- CICategoryGeometryAdjustment: Geometry Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputAngle: Angle

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Real Studio Plugins, version 13.1pr5

4.222.2 Methods

4.222.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.222.4 Properties

4.222.5 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Straighten attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.222.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Straighten attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.222.7   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.222.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.223 class CIFilterStretchCropMBS

4.223.1 class CIFilterStretchCropMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Stretch Crop filter.
Notes: Details for this filter:

FilterName:	CIStretchCrop
DisplayName English:	Stretch Crop
DisplayName German:	Schnitt dehnen
DisplayName French:	√âtirer le recadrage
DisplayName Italian:	Allarga o ritaglia
DisplayName Spanish:	Estirar recorte

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputSize: Size

- inputCropAmount: Crop Amount

- inputCenterStretchAmount: Center Stretch Amount

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Real Studio Plugins, version 13.1pr5

4.223.2   Methods

4.223.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.223.4   Properties

4.223.5   AttributeinputCenterStretchAmount as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Stretch Crop attribute.
Notes: This attribute should have this content:

Name:	inputCenterStretchAmount
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Center Stretch Amount
DisplayName German:	Zentrale Dehnung
DisplayName French:	Degr√© d‚Äô√©tirement au centre
DisplayName Italian:	Quantit√† di estensione centrale
DisplayName Spanish:	Cantidad de estiramiento central
DefaultNumber:	0.25
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.223.6   AttributeinputCropAmount as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Stretch Crop attribute.
Notes: This attribute should have this content:

Name:	inputCropAmount
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Crop Amount
DisplayName German:	Beschneidungsgrad
DisplayName French:	Degr√© de recadrage
DisplayName Italian:	Quantit√† di ritaglio
DisplayName Spanish:	Cantidad de recorte
DefaultNumber:	0.25
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.223.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Stretch Crop attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.223.8   AttributeinputSize as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Stretch Crop attribute.
Notes: This attribute should have this content:

Name:	inputSize
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName:	Size
DefaultVector:	[1280 720]
IdentityVector:	n/a

(Read only property)

4.223.9   inputCenterStretchAmount as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center Stretch Amount
Notes:

Name:	inputCenterStretchAmount
Class:	double (NSNumber)
DisplayName English:	Center Stretch Amount
DisplayName German:	Zentrale Dehnung
DisplayName French:	Degr√© d‚Äô√©tirement au centre
DisplayName Italian:	Quantit√† di estensione centrale
DisplayName Spanish:	Cantidad de estiramiento central
Type:	CIAttributeTypeScalar

See AttributeinputCenterStretchAmount for more details.
(Read and Write property)

4.223.10   inputCropAmount as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Crop Amount
Notes:

See AttributeinputCropAmount for more details.
(Read and Write property)

Name:	inputCropAmount
Class:	double (NSNumber)
DisplayName English:	Crop Amount
DisplayName German:	Beschneidungsgrad
DisplayName French:	Degr√© de recadrage
DisplayName Italian:	Quantit√† di ritaglio
DisplayName Spanish:	Cantidad de recorte
Type:	CIAttributeTypeScalar

4.223.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.223.12   inputSize as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Size
Notes:

Name:	inputSize
Class:	CIVectorMBS (CIVector)
DisplayName English:	Size
DisplayName German:	Size
DisplayName French:	Size
DisplayName Italian:	Size
DisplayName Spanish:	Size
Type:	CIAttributeTypePosition

See AttributeinputSize for more details.

(Read and Write property)

4.224 class CIFilterStripesGeneratorMBS

4.224.1 class CIFilterStripesGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Stripes filter.
Notes: Details for this filter:

FilterName:	CIStripesGenerator
DisplayName English:	Stripes
DisplayName German:	Streifen
DisplayName French:	Rayures
DisplayName Italian:	Strisce
DisplayName Spanish:	Franjas

Categories:

- CICategoryGenerator: Generator
- CICategoryVideo: Video
- CICategoryStillImage: Still Image
- CICategoryHighDynamicRange: High Dynamic Range
- CICategoryBuiltIn: Built-In

Input:

- inputCenter: Center
- inputColor0: Color 1
- inputColor1: Color 2
- inputWidth: Width
- inputSharpness: Sharpness

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.224.2 Methods

4.224.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.224.4 Properties

4.224.5 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Stripes attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.224.6 AttributeinputColor0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Stripes attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputColor0
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color 1
DisplayName German:	Farbe 1
DisplayName French:	Couleur 1
DisplayName Italian:	Colore 1
DisplayName Spanish:	Color 1
DefaultColor:	Red = 1, Green = 1, Blue = 1, Alpha = 1
IdentityNumber:	0

4.224.7 AttributeinputColor1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Stripes attribute.
Notes: This attribute should have this content:

Name:	inputColor1
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color 2
DisplayName German:	Farbe 2
DisplayName French:	Couleur 2
DisplayName Italian:	Colore 2
DisplayName Spanish:	Color 2
DefaultColor:	Red = 0, Green = 0, Blue = 0, Alpha = 1
IdentityNumber:	0

(Read only property)

4.224.8 AttributeinputSharpness as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Stripes attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputSharpness
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
DefaultNumber:	1
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.224.9   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Stripes attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	80
IdentityNumber:	0
SliderMaxNumber:	800
SliderMinNumber:	0

(Read only property)

4.224.10   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.224.11   inputColor0 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color 1
Notes:

Name:	inputColor0
Class:	CIColorMBS (CIColor)
DisplayName English:	Color 1
DisplayName German:	Farbe 1
DisplayName French:	Couleur 1
DisplayName Italian:	Colore 1
DisplayName Spanish:	Color 1
Type:	CIAttributeTypeColor

See AttributeinputColor0 for more details.
(Read and Write property)

4.224.12   inputColor1 as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color 2
Notes:

See AttributeinputColor1 for more details.
(Read and Write property)

Name:	inputColor1
Class:	CIColorMBS (CIColor)
DisplayName English:	Color 2
DisplayName German:	Farbe 2
DisplayName French:	Couleur 2
DisplayName Italian:	Colore 2
DisplayName Spanish:	Color 2
Type:	CIAttributeTypeColor

4.224.13   inputSharpness as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Sharpness
Notes:

Name:	inputSharpness
Class:	double (NSNumber)
DisplayName English:	Sharpness
DisplayName German:	Sch√§rfe
DisplayName French:	Nettet√©
DisplayName Italian:	Nitidezza
DisplayName Spanish:	Nitidez
Type:	CIAttributeTypeScalar

See AttributeinputSharpness for more details.
(Read and Write property)

4.224.14   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.225   class CIFilterSubtractBlendModeMBS

4.225.1   class CIFilterSubtractBlendModeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Subtract Blend Mode filter.
Notes: Details for this filter:

FilterName:	CISubtractBlendMode
DisplayName English:	Subtract Blend Mode
DisplayName German:	Mischmethode ‚ÄûSubtrahieren‚Äú
DisplayName French:	Mode de fusion Soustraction
DisplayName Italian:	Modalit√† sfumatura sottrazione
DisplayName Spanish:	Restar modo de mezcla

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.225.2 Methods

4.225.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.225.4 Properties

4.225.5 AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Subtract Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.225.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Subtract Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.225.7   inputBackgroundImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.225.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.226   class CIFilterSunbeamsGeneratorMBS

4.226.1   class CIFilterSunbeamsGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Sunbeams filter.
Notes: Details for this filter:

FilterName:	CISunbeamsGenerator
DisplayName English:	Sunbeams
DisplayName German:	Sonnenstrahlen
DisplayName French:	Rayons solaires
DisplayName Italian:	Raggi di sole
DisplayName Spanish:	Rayos de sol

Categories:

- CICategoryGenerator: Generator

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputCenter: Center

- inputColor: Color

- inputSunRadius: Sun Radius

- inputMaxStriationRadius: Maximum Striation Radius

- inputStriationStrength: Striation Strength

- inputStriationContrast: Striation Contrast

- inputTime: Time

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.226.2   Methods

4.226.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.226.4   Properties

4.226.5   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sunbeams attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.226.6   AttributeinputColor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sunbeams attribute.
Notes: This attribute should have this content:

Name:	inputColor
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
DefaultColor:	Red = 1, Green = 0.5, Blue = 0, Alpha = 1
IdentityNumber:	0

(Read only property)

4.226.7   AttributeinputMaxStriationRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sunbeams attribute.
Notes: This attribute should have this content:

Name:	inputMaxStriationRadius
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Maximum Striation Radius
DisplayName German:	Maximaler Radius f√°r Riffelung
DisplayName French:	Rayon maximum des stries
DisplayName Italian:	Raggio di massima striatura
DisplayName Spanish:	Radio de estriaci√n m√°ximo
DefaultNumber:	2.58
IdentityNumber:	2.58
SliderMaxNumber:	10
SliderMinNumber:	0

(Read only property)

4.226.8   AttributeinputStriationContrast as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sunbeams attribute.
Notes: This attribute should have this content:

Name:	inputStriationContrast
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Striation Contrast
DisplayName German:	Kontrast f√ºr Riffelung
DisplayName French:	Contraste des stries
DisplayName Italian:	Contrasto striatura
DisplayName Spanish:	Contraste de la estriaci√n
DefaultNumber:	1.375
IdentityNumber:	1.375
SliderMaxNumber:	5
SliderMinNumber:	0

(Read only property)

4.226.9   AttributeinputStriationStrength as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sunbeams attribute.
Notes: This attribute should have this content:

Name:	inputStriationStrength
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Striation Strength
DisplayName German:	St√§rke der Riffelung
DisplayName French:	Force des stries
DisplayName Italian:	Livello striatura
DisplayName Spanish:	Intensidad de la estriaci√n
DefaultNumber:	0.5
IdentityNumber:	0.5
SliderMaxNumber:	3
SliderMinNumber:	0

(Read only property)

4.226.10   AttributeinputSunRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sunbeams attribute.
Notes: This attribute should have this content:

Name:	inputSunRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Sun Radius
DisplayName German:	Radius der Sonne
DisplayName French:	Rayon du soleil
DisplayName Italian:	Raggio del sole
DisplayName Spanish:	Radio solar
DefaultNumber:	40
IdentityNumber:	40
SliderMaxNumber:	800
SliderMinNumber:	0

(Read only property)

4.226.11   AttributeinputTime as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Sunbeams attribute.
Notes: This attribute should have this content:

(Read only property)

4.226.12   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

Name:	inputTime
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

4.226.13   inputColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color
Notes:

Name:	inputColor
Class:	CIColorMBS (CIColor)
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
Type:	CIAttributeTypeColor

See AttributeinputColor for more details.
(Read and Write property)

4.226.14   inputMaxStriationRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Maximum Striation Radius
Notes:

Name:	inputMaxStriationRadius
Class:	double (NSNumber)
DisplayName English:	Maximum Striation Radius
DisplayName German:	Maximaler Radius f√ºr Riffelung
DisplayName French:	Rayon maximum des stries
DisplayName Italian:	Raggio di massima striatura
DisplayName Spanish:	Radio de estriaci√n m√°ximo
Type:	CIAttributeTypeScalar

See AttributeinputMaxStriationRadius for more details.
(Read and Write property)

4.226.15   inputStriationContrast as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Striation Contrast
Notes:

Name:	inputStriationContrast
Class:	double (NSNumber)
DisplayName English:	Striation Contrast
DisplayName German:	Kontrast f√ºr Riffelung
DisplayName French:	Contraste des stries
DisplayName Italian:	Contrasto striatura
DisplayName Spanish:	Contraste de la estriaci√n
Type:	CIAttributeTypeScalar

See AttributeinputStriationContrast for more details.
(Read and Write property)

4.226.16   inputStriationStrength as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Striation Strength
Notes:

Name:	inputStriationStrength
Class:	double (NSNumber)
DisplayName English:	Striation Strength
DisplayName German:	St√§rke der Riffelung
DisplayName French:	Force des stries
DisplayName Italian:	Livello striatura
DisplayName Spanish:	Intensidad de la estriaci√n
Type:	CIAttributeTypeScalar

See AttributeinputStriationStrength for more details.
(Read and Write property)

4.226.17   inputSunRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Sun Radius
Notes:

Name:	inputSunRadius
Class:	double (NSNumber)
DisplayName English:	Sun Radius
DisplayName German:	Radius der Sonne
DisplayName French:	Rayon du soleil
DisplayName Italian:	Raggio del sole
DisplayName Spanish:	Radio solar
Type:	CIAttributeTypeDistance

See AttributeinputSunRadius for more details.
(Read and Write property)

4.226.18   inputTime as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Time
Notes:

See AttributeinputTime for more details.
(Read and Write property)

Name:	inputTime
Class:	double (NSNumber)
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
Type:	CIAttributeTypeScalar

4.227 class CIFilterSwipeTransitionMBS

4.227.1 class CIFilterSwipeTransitionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Swipe filter.
Notes: Details for this filter:

FilterName:	CISwipeTransition
DisplayName English:	Swipe
DisplayName German:	Wischen
DisplayName French:	Balayer
DisplayName Italian:	Colpo
DisplayName Spanish:	Barrido

Categories:

- CICategoryTransition: Transition

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputTargetImage: Target Image

- inputExtent: Extent

- inputColor: Color

- inputTime: Time

- inputAngle: Angle

- inputWidth: Width

- inputOpacity: Opacity

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.227.2   Methods

4.227.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.227.4   Properties

4.227.5   AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Swipe attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.227.6   AttributeinputColor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Swipe attribute.
Notes: This attribute should have this content:

Name:	inputColor
Class:	CIColorMBS
Type:	CIAttributeTypeOpaqueColor
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
DefaultColor:	Red = 1, Green = 1, Blue = 1, Alpha = 1
IdentityNumber:	0

(Read only property)

4.227.7   AttributeinputExtent as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Swipe attribute.
Notes: This attribute should have this content:

Name:	inputExtent
Class:	CIVectorMBS
Type:	CIAttributeTypeRectangle
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
DefaultVector:	[0 0 300 300]
IdentityVector:	n/a

(Read only property)

4.227.8   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Swipe attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.227.9   AttributeinputOpacity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Swipe attribute.
Notes: This attribute should have this content:

Name:	inputOpacity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Opacity
DisplayName German:	Deckkraft
DisplayName French:	Opacit√©
DisplayName Italian:	Opacit√†
DisplayName Spanish:	Opacidad
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.227.10   AttributeinputTargetImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Swipe attribute.
Notes: This attribute should have this content:

Name:	inputTargetImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.227.11   AttributeinputTime as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Swipe attribute.
Notes: This attribute should have this content:

Name:	inputTime
Class:	double
Type:	CIAttributeTypeTime
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.227.12   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Swipe attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	300
IdentityNumber:	0
MaxNumber:	0
MinNumber:	0.1
SliderMaxNumber:	800
SliderMinNumber:	0.1

(Read only property)

4.227.13   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.

(Read and Write property)

4.227.14   inputColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color
Notes:

Name:	inputColor
Class:	CIColorMBS (CIColor)
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
Type:	CIAttributeTypeOpaqueColor

See AttributeinputColor for more details.
(Read and Write property)

4.227.15   inputExtent as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Extent
Notes:

Name:	inputExtent
Class:	CIVectorMBS (CIVector)
DisplayName English:	Extent
DisplayName German:	Betrag
DisplayName French:	√âtendue
DisplayName Italian:	Ampiezza
DisplayName Spanish:	Amplitud
Type:	CIAttributeTypeRectangle

See AttributeinputExtent for more details.
(Read and Write property)

4.227.16   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.227.17   inputOpacity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Opacity
Notes:

Name:	inputOpacity
Class:	double (NSNumber)
DisplayName English:	Opacity
DisplayName German:	Deckkraft
DisplayName French:	Opacit√©
DisplayName Italian:	Opacit√†
DisplayName Spanish:	Opacidad
Type:	CIAttributeTypeScalar

See AttributeinputOpacity for more details.
(Read and Write property)

4.227.18   inputTargetImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Target Image
Notes:

Name:	inputTargetImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Target Image
DisplayName German:	Zielbild
DisplayName French:	Image cible
DisplayName Italian:	Immagine target
DisplayName Spanish:	Imagen de destino
Type:	CIAttributeTypeImage

See AttributeinputTargetImage for more details.
(Read and Write property)

4.227.19 inputTime as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Time
Notes:

Name:	inputTime
Class:	double (NSNumber)
DisplayName English:	Time
DisplayName German:	Zeit
DisplayName French:	Dur√©e
DisplayName Italian:	Tempo
DisplayName Spanish:	Tiempo
Type:	CIAttributeTypeTime

See AttributeinputTime for more details.
(Read and Write property)

4.227.20 inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

See AttributeinputWidth for more details.
(Read and Write property)

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

4.228 class CIFilterTemperatureAndTintMBS

4.228.1 class CIFilterTemperatureAndTintMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Temperature and Tint filter.
Notes: Details for this filter:

FilterName:	CITemperatureAndTint
DisplayName English:	Temperature and Tint
DisplayName German:	Temperatur und F√§rbung
DisplayName French:	Temp√©rature et teinte
DisplayName Italian:	Temperatura e tinta
DisplayName Spanish:	Temperatura y tinte

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputNeutral: Neutral

- inputTargetNeutral: Target Neutral

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- [MBS Real Studio Plugins, version 13.1pr5](#)

4.228.2   Methods

4.228.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.228.4   Properties

4.228.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Temperature and Tint attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.228.6   AttributeinputNeutral as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Temperature and Tint attribute.
Notes: This attribute should have this content:

Name:	inputNeutral
Class:	CIVectorMBS
Type:	CIAttributeTypeOffset
DisplayName:	Neutral
DefaultVector:	[6500 0]
IdentityVector:	[6500 0]

(Read only property)

4.228.7   AttributeinputTargetNeutral as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Temperature and Tint attribute.
Notes: This attribute should have this content:

Name:	inputTargetNeutral
Class:	CIVectorMBS
Type:	CIAttributeTypeOffset
DisplayName English:	Target Neutral
DisplayName German:	Zielneutral
DisplayName French:	Couleur neutre cible
DisplayName Italian:	Elemento neutro target
DisplayName Spanish:	Neutro para el destino
DefaultVector:	[6500 0]
IdentityVector:	[6500 0]

(Read only property)

4.228.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.228.9   inputNeutral as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Neutral
Notes:

Name:	inputNeutral
Class:	CIVectorMBS (CIVector)
DisplayName English:	Neutral
DisplayName German:	Neutral
DisplayName French:	Neutral
DisplayName Italian:	Neutral
DisplayName Spanish:	Neutral
Type:	CIAttributeTypeOffset

See AttributeinputNeutral for more details.
(Read and Write property)

4.228.10   inputTargetNeutral as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Target Neutral
Notes:

See AttributeinputTargetNeutral for more details.
(Read and Write property)

Name:	inputTargetNeutral
Class:	CIVectorMBS (CIVector)
DisplayName English:	Target Neutral
DisplayName German:	Zielneutral
DisplayName French:	Couleur neutre cible
DisplayName Italian:	Elemento neutro target
DisplayName Spanish:	Neutro para el destino
Type:	CIAttributeTypeOffset

4.229   class CIFilterTextImageGeneratorMBS

4.229.1   class CIFilterTextImageGeneratorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Text Image Generator filter.
Notes: Details for this filter:

FilterName:	CITextImageGenerator
DisplayName English:	Text Image Generator
DisplayName German:	Textbildgenerator
DisplayName French:	G√©n√©rateur d‚Äôimage de texte
DisplayName Italian:	Generatore immagine di testo
DisplayName Spanish:	Generador de im√°genes con texto

Categories:

- CICategoryGenerator: Generator

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputText: Text

- inputFontName: Font Name

- inputFontSize: Font Size

- inputScaleFactor: Scale Factor

- inputPadding: Padding

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.229.2 Methods

4.229.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.229.4 Properties

4.229.5 AttributeinputFontName as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Text Image Generator attribute.
Notes: This attribute should have this content:

Name:	inputFontName
Class:	String
DisplayName English:	Font Name
DisplayName German:	Schriftname
DisplayName French:	Nom de la police
DisplayName Italian:	Nome font
DisplayName Spanish:	Nombre de tipo de letra
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.229.6 AttributeinputFontSize as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Text Image Generator attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputFontSize
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Font Size
DisplayName German:	Schriftgr√√üe
DisplayName French:	Taille de la police
DisplayName Italian:	Dimensioni font
DisplayName Spanish:	Tama√±o de letra
DefaultNumber:	12
IdentityNumber:	0
SliderMaxNumber:	128
SliderMinNumber:	9

4.229.7   AttributeinputPadding as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Text Image Generator attribute.
Notes: This attribute should have this content:

Name:	inputPadding
Class:	double
Type:	CIAttributeTypeInteger
DisplayName:	Padding
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	200
MinNumber:	0
SliderMaxNumber:	50
SliderMinNumber:	0

(Read only property)

4.229.8   AttributeinputScaleFactor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Text Image Generator attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputScaleFactor
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Scale Factor
DisplayName German:	Skalierungsfaktor
DisplayName French:	Facteur d‚Äô√©chelle
DisplayName Italian:	Fattore di scala
DisplayName Spanish:	Factor de escala
DefaultNumber:	1
IdentityNumber:	0
SliderMaxNumber:	4
SliderMinNumber:	1

4.229.9 AttributeinputText as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Text Image Generator attribute.
Notes: This attribute should have this content:

Name:	inputText
Class:	String
DisplayName:	Text
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.229.10 inputFontName as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Font Name
Notes:

See AttributeinputFontName for more details.
(Read and Write property)

4.229.11 inputFontSize as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputFontName
Class:	String (NSString)
DisplayName English:	Font Name
DisplayName German:	Schriftname
DisplayName French:	Nom de la police
DisplayName Italian:	Nome font
DisplayName Spanish:	Nombre de tipo de letra

Function: The attribute Font Size
Notes:

Name:	inputFontSize
Class:	double (NSNumber)
DisplayName English:	Font Size
DisplayName German:	Schriftgr√√üe
DisplayName French:	Taille de la police
DisplayName Italian:	Dimensioni font
DisplayName Spanish:	Tama√±o de letra
Type:	CIAttributeTypeScalar

See AttributeinputFontSize for more details.
(Read and Write property)

4.229.12   inputPadding as double

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Padding
Notes:

Name:	inputPadding
Class:	double (NSNumber)
DisplayName English:	Padding
DisplayName German:	Padding
DisplayName French:	Padding
DisplayName Italian:	Padding
DisplayName Spanish:	Padding
Type:	CIAttributeTypeInteger

See AttributeinputPadding for more details.
(Read and Write property)

4.229.13 inputScaleFactor as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Scale Factor
Notes:

Name:	inputScaleFactor
Class:	double (NSNumber)
DisplayName English:	Scale Factor
DisplayName German:	Skalierungsfaktor
DisplayName French:	Facteur d,Äô√©chelle
DisplayName Italian:	Fattore di scala
DisplayName Spanish:	Factor de escala
Type:	CIAttributeTypeScalar

See AttributeinputScaleFactor for more details.
(Read and Write property)

4.229.14 inputText as String

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Text
Notes:

Name:	inputText
Class:	String (NSString)
DisplayName English:	Text
DisplayName German:	Text
DisplayName French:	Text
DisplayName Italian:	Text
DisplayName Spanish:	Text

See AttributeinputText for more details.
(Read and Write property)

4.230   class CIFilterThermalMBS

4.230.1   class CIFilterThermalMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Thermal filter.
Notes: Details for this filter:

FilterName:	CIThermal
DisplayName English:	Thermal
DisplayName German:	W√§rmebild
DisplayName French:	Thermique
DisplayName Italian:	Termico
DisplayName Spanish:	T√©rmica

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.230.2 Methods

4.230.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.230.4 Properties

4.230.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Thermal attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.230.6 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.231 class CIFilterToneCurveMBS

4.231.1 class CIFilterToneCurveMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Tone Curve filter.
Notes: Details for this filter:

FilterName:	CIToneCurve
DisplayName English:	Tone Curve
DisplayName German:	Farbtonkurve
DisplayName French:	Courbe tonale
DisplayName Italian:	Curva tonale
DisplayName Spanish:	Curva tonal

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputPoint0: Point 0

- inputPoint1: Point 1

- inputPoint2: Point 2

- inputPoint3: Point 3

- inputPoint4: Point 4

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Real Studio Plugins, version 13.1pr5

4.231.2   Methods

4.231.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.231.4   Properties

4.231.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Tone Curve attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.231.6   AttributeinputPoint0 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Tone Curve attribute.
Notes: This attribute should have this content:

Name:	inputPoint0
Class:	CIVectorMBS
Type:	CIAttributeTypeOffset
DisplayName English:	Point 0
DisplayName German:	Punkt 0
DisplayName French:	Point¬†0
DisplayName Italian:	Punto 0
DisplayName Spanish:	Punto 0
DefaultVector:	[0 0]
IdentityVector:	[0 0]

(Read only property)

4.231.7   AttributeinputPoint1 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Tone Curve attribute.
Notes: This attribute should have this content:

Name:	inputPoint1
Class:	CIVectorMBS
Type:	CIAttributeTypeOffset
DisplayName English:	Point 1
DisplayName German:	Punkt 1
DisplayName French:	Point 1
DisplayName Italian:	Punto 1
DisplayName Spanish:	Punto 1
DefaultVector:	[0.25 0.25]
IdentityVector:	[0.25 0.25]

(Read only property)

4.231.8   AttributeinputPoint2 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Tone Curve attribute.
Notes: This attribute should have this content:

```
Name:                  inputPoint2
 Class:                 CIVectorMBS
 Type:                  CIAttributeTypeOffset
 DisplayName English:   Point 2
 DisplayName German:    Punkt 2
 DisplayName French:    Point 2
 DisplayName Italian:   Punto 2
 DisplayName Spanish:   Punto 2
 DefaultVector:         [ 0.5 0.5 ]
 IdentityVector:        [ 0.5 0.5 ]
```

(Read only property)

4.231.9   AttributeinputPoint3 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Tone Curve attribute.
Notes: This attribute should have this content:

```
Name:                  inputPoint3
 Class:                 CIVectorMBS
 Type:                  CIAttributeTypeOffset
 DisplayName English:   Point 3
 DisplayName German:    Punkt 3
 DisplayName French:    Point¬†3
 DisplayName Italian:   Punto 3
 DisplayName Spanish:   Punto 3
 DefaultVector:         [ 0.75 0.75 ]
 IdentityVector:        [ 0.75 0.75 ]
```

(Read only property)

4.231.10   AttributeinputPoint4 as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Tone Curve attribute.
Notes: This attribute should have this content:

Name:	inputPoint4
Class:	CIVectorMBS
Type:	CIAttributeTypeOffset
DisplayName English:	Point 4
DisplayName German:	Punkt 4
DisplayName French:	Point¬†4
DisplayName Italian:	Punto 4
DisplayName Spanish:	Punto 4
DefaultVector:	[1 1]
IdentityVector:	[1 1]

(Read only property)

4.231.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.231.12   inputPoint0 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Point 0
Notes:

Name:	inputPoint0
Class:	CIVectorMBS (CIVector)
DisplayName English:	Point 0
DisplayName German:	Punkt 0
DisplayName French:	Point¬†0
DisplayName Italian:	Punto 0
DisplayName Spanish:	Punto 0
Type:	CIAttributeTypeOffset

See AttributeinputPoint0 for more details.
(Read and Write property)

4.231.13   inputPoint1 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Point 1
Notes:

Name:	inputPoint1
Class:	CIVectorMBS (CIVector)
DisplayName English:	Point 1
DisplayName German:	Punkt 1
DisplayName French:	Point 1
DisplayName Italian:	Punto 1
DisplayName Spanish:	Punto 1
Type:	CIAttributeTypeOffset

See AttributeinputPoint1 for more details.
(Read and Write property)

4.231.14   inputPoint2 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Point 2
Notes:

See AttributeinputPoint2 for more details.
(Read and Write property)

Name:	inputPoint2
Class:	CIVectorMBS (CIVector)
DisplayName English:	Point 2
DisplayName German:	Punkt 2
DisplayName French:	Point 2
DisplayName Italian:	Punto 2
DisplayName Spanish:	Punto 2
Type:	CIAttributeTypeOffset

4.231.15 inputPoint3 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Point 3
Notes:

Name:	inputPoint3
Class:	CIVectorMBS (CIVector)
DisplayName English:	Point 3
DisplayName German:	Punkt 3
DisplayName French:	Point¬†3
DisplayName Italian:	Punto 3
DisplayName Spanish:	Punto 3
Type:	CIAttributeTypeOffset

See AttributeinputPoint3 for more details.
(Read and Write property)

4.231.16 inputPoint4 as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Point 4
Notes:

Name:	inputPoint4
Class:	CIVectorMBS (CIVector)
DisplayName English:	Point 4
DisplayName German:	Punkt 4
DisplayName French:	Point¬†4
DisplayName Italian:	Punto 4
DisplayName Spanish:	Punto 4
Type:	CIAttributeTypeOffset

See AttributeinputPoint4 for more details.
(Read and Write property)

4.232 class CIFilterTorusLensDistortionMBS

4.232.1 class CIFilterTorusLensDistortionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Torus Lens Distortion filter.
Notes: Details for this filter:

FilterName:	CITorusLensDistortion
DisplayName English:	Torus Lens Distortion
DisplayName German:	Verzerrung ‚ÄûTorus-Linse‚Äú
DisplayName French:	D√©formation Lentille torique
DisplayName Italian:	Distorsione lenti Torus
DisplayName Spanish:	Distorsi√n por lente toroidal

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputRadius: Radius

- inputWidth: Width

- inputRefraction: Refraction

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.232.2   Methods

4.232.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.232.4   Properties

4.232.5   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Torus Lens Distortion attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.232.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Torus Lens Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.232.7 AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Torus Lens Distortion attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	160
IdentityNumber:	0
SliderMaxNumber:	500
SliderMinNumber:	0

(Read only property)

4.232.8 AttributeinputRefraction as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Torus Lens Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRefraction
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Refraction
DisplayName German:	Lichtbrechung
DisplayName French:	R√©fraction
DisplayName Italian:	Rifrazione
DisplayName Spanish:	Refracci√n
DefaultNumber:	1.7
IdentityNumber:	1
SliderMaxNumber:	5
SliderMinNumber:	0

4.232.9   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Torus Lens Distortion attribute.
Notes: This attribute should have this content:

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	80
IdentityNumber:	0
SliderMaxNumber:	200
SliderMinNumber:	0

(Read only property)

4.232.10   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

(Read and Write property)

4.232.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.232.12   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

4.232.13   inputRefraction as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Refraction
Notes:

Name:	inputRefraction
Class:	double (NSNumber)
DisplayName English:	Refraction
DisplayName German:	Lichtbrechung
DisplayName French:	R√©fraction
DisplayName Italian:	Rifrazione
DisplayName Spanish:	Refracci√n
Type:	CIAttributeTypeScalar

See AttributeinputRefraction for more details.
(Read and Write property)

4.232.14   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.233   class CIFilterTriangleKaleidoscopeMBS

4.233.1   class CIFilterTriangleKaleidoscopeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Triangle Kaleidoscope filter.
Notes: Details for this filter:

FilterName:	CITriangleKaleidoscope
DisplayName English:	Triangle Kaleidoscope
DisplayName German:	Dreieckskaleidoskop
DisplayName French:	Kal√©idoscope en forme de triangle
DisplayName Italian:	Caleidoscopio triangolare
DisplayName Spanish:	Caleidoscopio triangular

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputPoint: Point

- inputSize: Size

- inputRotation: Rotation

- inputDecay: Decay

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.233.2 Methods

4.233.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.233.4 Properties

4.233.5 AttributeinputDecay as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Triangle Kaleidoscope attribute.
Notes: This attribute should have this content:

Name:	inputDecay
Class:	double
Type:	CIAttributeTypeScalar
DisplayName:	Decay
DefaultNumber:	0.85
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

(Read only property)

4.233.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Triangle Kaleidoscope attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.233.7   AttributeinputPoint as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Triangle Kaleidoscope attribute.
Notes: This attribute should have this content:

Name:	inputPoint
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Point
DisplayName German:	Point
DisplayName French:	Point
DisplayName Italian:	Punto
DisplayName Spanish:	Punto
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.233.8   AttributeinputRotation as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Triangle Kaleidoscope attribute.
Notes: This attribute should have this content:

(Read only property)

Name: inputRotation
Class: double
Type: CIAttributeTypeAngle
DisplayName: Rotation
DefaultNumber: 5.924285
IdentityNumber: 0
SliderMaxNumber: 6.283185
SliderMinNumber: 0

4.233.9   AttributeinputSize as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Triangle Kaleidoscope attribute.
Notes: This attribute should have this content:

Name: inputSize
Class: double
Type: CIAttributeTypeScalar
DisplayName: Size
DefaultNumber: 700
IdentityNumber: 0
SliderMaxNumber: 1000
SliderMinNumber: 0

(Read only property)

4.233.10   inputDecay as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Decay
Notes:

See AttributeinputDecay for more details.
(Read and Write property)

4.233.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Name:	inputDecay
Class:	double (NSNumber)
DisplayName English:	Decay
DisplayName German:	Decay
DisplayName French:	Decay
DisplayName Italian:	Decay
DisplayName Spanish:	Decay
Type:	CIAttributeTypeScalar

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.233.12   inputPoint as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Point
Notes:

Name:	inputPoint
Class:	CIVectorMBS (CIVector)
DisplayName English:	Point
DisplayName German:	Point
DisplayName French:	Point
DisplayName Italian:	Punto
DisplayName Spanish:	Punto
Type:	CIAttributeTypePosition

See AttributeinputPoint for more details.
(Read and Write property)

4.233.13   inputRotation as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Rotation
Notes:

Name:	inputRotation
Class:	double (NSNumber)
DisplayName English:	Rotation
DisplayName German:	Rotation
DisplayName French:	Rotation
DisplayName Italian:	Rotation
DisplayName Spanish:	Rotation
Type:	CIAttributeTypeAngle

See AttributeinputRotation for more details.
(Read and Write property)

4.233.14   inputSize as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Size
Notes:

Name:	inputSize
Class:	double (NSNumber)
DisplayName English:	Size
DisplayName German:	Size
DisplayName French:	Size
DisplayName Italian:	Size
DisplayName Spanish:	Size
Type:	CIAttributeTypeScalar

See AttributeinputSize for more details.
(Read and Write property)

4.234   class CIFilterTriangleTileMBS

4.234.1   class CIFilterTriangleTileMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Triangle Tile filter.
Notes: Details for this filter:

FilterName:	CITriangleTile
DisplayName English:	Triangle Tile
DisplayName German:	Dreieckig kacheln
DisplayName French:	Mosa√Øque de triangles
DisplayName Italian:	Mosaico triangolare
DisplayName Spanish:	Mosaico triangular

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputAngle: Angle

- inputWidth: Width

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.234.2 Methods

4.234.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.234.4 Properties

4.234.5 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Triangle Tile attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.234.6 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Triangle Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.234.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Triangle Tile attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.234.8   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Triangle Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	100
IdentityNumber:	0
SliderMaxNumber:	200
SliderMinNumber:	1

4.234.9 inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.234.10 inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

4.234.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.234.12   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.235   class CIFilterTwelvefoldReflectedTileMBS

4.235.1   class CIFilterTwelvefoldReflectedTileMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Twelvefold Reflected Tile filter.
Notes: Details for this filter:

FilterName:	CITwelvefoldReflectedTile
DisplayName English:	Twelvefold Reflected Tile
DisplayName German:	12-fach reflektierte Kachel
DisplayName French:	Mosa√Øque r√©fl√©chie 12 fois
DisplayName Italian:	Mosaico riflesso in dodici direzioni
DisplayName Spanish:	Mosaico reflejado doce veces

Categories:

- CICategoryTileEffect: Tile Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputAngle: Angle

- inputWidth: Width

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.235.2 Methods

4.235.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.235.4 Properties

4.235.5 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Twelvefold Reflected Tile attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	0
IdentityNumber:	0
SliderMaxNumber:	3.141593
SliderMinNumber:	-3.141593

(Read only property)

4.235.6 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Twelvefold Reflected Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.235.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Twelvefold Reflected Tile attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.235.8   AttributeinputWidth as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Twelvefold Reflected Tile attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputWidth
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
DefaultNumber:	100
IdentityNumber:	100
SliderMaxNumber:	200
SliderMinNumber:	1

4.235.9   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.235.10   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

4.235.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.235.12   inputWidth as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Width
Notes:

Name:	inputWidth
Class:	double (NSNumber)
DisplayName English:	Width
DisplayName German:	Breite
DisplayName French:	Largeur
DisplayName Italian:	Larghezza
DisplayName Spanish:	Anchura
Type:	CIAttributeTypeDistance

See AttributeinputWidth for more details.
(Read and Write property)

4.236   class CIFilterTwirlDistortionMBS

4.236.1   class CIFilterTwirlDistortionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Twirl Distortion filter.
Notes: Details for this filter:

FilterName:	CITwirlDistortion
DisplayName English:	Twirl Distortion
DisplayName German:	Verzerrung ‚ÄûWirbeln‚Äú
DisplayName French:	D√©formation Spirale
DisplayName Italian:	Distorsione spirale
DisplayName Spanish:	Distorsi√n por giro

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputRadius: Radius

- inputAngle: Angle

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.236.2   Methods

4.236.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.236.4   Properties

4.236.5   AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Twirl Distortion attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	3.141593
IdentityNumber:	0
SliderMaxNumber:	12.56637
SliderMinNumber:	-12.56637

(Read only property)

4.236.6   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Twirl Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.236.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Twirl Distortion attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.236.8   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Twirl Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	300
IdentityNumber:	300
SliderMaxNumber:	500
SliderMinNumber:	0

4.236.9   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.236.10   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

Name: inputCenter
 Class: CIVectorMBS (CIVector)
 DisplayName English: Center
 DisplayName German: Mitte
 DisplayName French: Centre
 DisplayName Italian: Centro
 DisplayName Spanish: Centro
 Type: CIAttributeTypePosition

4.236.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name: inputImage
 Class: CIImageMBS (CIImage)
 DisplayName English: Image
 DisplayName German: Bild
 DisplayName French: Image
 DisplayName Italian: Immagine
 DisplayName Spanish: Imagen
 Type: CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.236.12   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name: inputRadius
 Class: double (NSNumber)
 DisplayName English: Radius
 DisplayName German: Radius
 DisplayName French: Rayon
 DisplayName Italian: Raggio
 DisplayName Spanish: Radio
 Type: CIAttributeTypeDistance

See AttributeinputRadius for more details.

(Read and Write property)

4.237   class CIFilterUnsharpMaskMBS

4.237.1   class CIFilterUnsharpMaskMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Unsharp Mask filter.
Notes: Details for this filter:

FilterName:	CIUnsharpMask
DisplayName English:	Unsharp Mask
DisplayName German:	Unscharf maskieren
DisplayName French:	Rendre le masque flou
DisplayName Italian:	Maschera di contrasto
DisplayName Spanish:	Desenfocar m√°scara

Categories:

- CICategorySharpen: Sharpen

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputRadius: Radius

- inputIntensity: Intensity

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.237.2 Methods

4.237.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.237.4 Properties

4.237.5 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Unsharp Mask attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.237.6 AttributeinputIntensity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Unsharp Mask attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputIntensity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
DefaultNumber:	0.5
IdentityNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.237.7   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Unsharp Mask attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	2.5
IdentityNumber:	0
SliderMaxNumber:	100
SliderMinNumber:	0

(Read only property)

4.237.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

(Read and Write property)

4.237.9 inputIntensity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Intensity
Notes:

Name:	inputIntensity
Class:	double (NSNumber)
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
Type:	CIAttributeTypeScalar

See AttributeinputIntensity for more details.
(Read and Write property)

4.237.10 inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

4.238 class CIFilterVibranceMBS

4.238.1 class CIFilterVibranceMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Vibrance filter.
Notes: Details for this filter:

FilterName:	CIVibrance
DisplayName English:	Vibrance
DisplayName German:	Lebendigkeit
DisplayName French:	Brillance
DisplayName Italian:	Vividezza
DisplayName Spanish:	Vivacidad

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputAmount: Amount

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- MBS Real Studio Plugins, version 13.1pr5

4.238.2   Methods

4.238.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.238.4   Properties

4.238.5   AttributeinputAmount as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vibrance attribute.
Notes: This attribute should have this content:

Name:	inputAmount
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Amount
DisplayName German:	St√§rke
DisplayName French:	Montant
DisplayName Italian:	Quantit√†
DisplayName Spanish:	Cantidad
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	-1
SliderMaxNumber:	1
SliderMinNumber:	-1

(Read only property)

4.238.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vibrance attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.238.7   inputAmount as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Amount
Notes:

Name:	inputAmount
Class:	double (NSNumber)
DisplayName English:	Amount
DisplayName German:	St√§rke
DisplayName French:	Montant
DisplayName Italian:	Quantit√†
DisplayName Spanish:	Cantidad
Type:	CIAttributeTypeScalar

See AttributeinputAmount for more details.
(Read and Write property)

4.238.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.239 class CIFilterVignetteEffectMBS

4.239.1 class CIFilterVignetteEffectMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Vignette Effect filter.
Notes: Details for this filter:

FilterName:	CIVignetteEffect
DisplayName English:	Vignette Effect
DisplayName German:	Vignetteneffekt
DisplayName French:	Effet de vignette
DisplayName Italian:	Effetto vignettatura
DisplayName Spanish:	Efecto de degradado

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image
- inputCenter: Center
- inputRadius: Radius
- inputIntensity: Intensity
- inputFalloff: Falloff

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.239.2   Methods

4.239.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.239.4   Properties

4.239.5   AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vignette Effect attribute.
Notes: This attribute should have this content:

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

(Read only property)

4.239.6   AttributeinputFalloff as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vignette Effect attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputFalloff
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Falloff
DisplayName German:	Nachlassen
DisplayName French:	Att√©nuation
DisplayName Italian:	Calo
DisplayName Spanish:	Disminuci√n
DefaultNumber:	0.5
IdentityNumber:	0
MaxNumber:	1
MinNumber:	0
SliderMaxNumber:	1
SliderMinNumber:	0

4.239.7 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vignette Effect attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.239.8 AttributeinputIntensity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vignette Effect attribute.
Notes: This attribute should have this content:

Name:	inputIntensity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
DefaultNumber:	1
IdentityNumber:	0
MaxNumber:	1
MinNumber:	-1
SliderMaxNumber:	1
SliderMinNumber:	-1

(Read only property)

4.239.9   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vignette Effect attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	150
IdentityNumber:	0
SliderMaxNumber:	2000
SliderMinNumber:	0

(Read only property)

4.239.10 inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.239.11 inputFalloff as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Falloff
Notes:

Name:	inputFalloff
Class:	double (NSNumber)
DisplayName English:	Falloff
DisplayName German:	Nachlassen
DisplayName French:	Att√©nuation
DisplayName Italian:	Calo
DisplayName Spanish:	Disminuci√n
Type:	CIAttributeTypeScalar

See AttributeinputFalloff for more details.
(Read and Write property)

4.239.12 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.239.13   inputIntensity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Intensity
Notes:

Name:	inputIntensity
Class:	double (NSNumber)
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
Type:	CIAttributeTypeScalar

See AttributeinputIntensity for more details.
(Read and Write property)

4.239.14   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

4.240   class CIFilterVignetteMBS

4.240.1   class CIFilterVignetteMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Vignette filter.
Notes: Details for this filter:

FilterName:	CIVignette
DisplayName English:	Vignette
DisplayName German:	Vignette
DisplayName French:	Vignette
DisplayName Italian:	Vignettatura
DisplayName Spanish:	Degradado

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryStillImage: Still Image

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputIntensity: Intensity

- inputRadius: Radius

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.240.2   Methods

4.240.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.240.4   Properties

4.240.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vignette attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.240.6   AttributeinputIntensity as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vignette attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputIntensity
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
DefaultNumber:	0
IdentityNumber:	0
MaxNumber:	1
MinNumber:	-1
SliderMaxNumber:	1
SliderMinNumber:	-1

4.240.7   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vignette attribute.
Notes: This attribute should have this content:

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeScalar
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	1
IdentityNumber:	0
MaxNumber:	2
MinNumber:	0
SliderMaxNumber:	2
SliderMinNumber:	0

(Read only property)

4.240.8   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.240.9 inputIntensity as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Intensity
Notes:

Name:	inputIntensity
Class:	double (NSNumber)
DisplayName English:	Intensity
DisplayName German:	Intensit√§t
DisplayName French:	Intensit√©
DisplayName Italian:	Intensit√†
DisplayName Spanish:	Intensidad
Type:	CIAttributeTypeScalar

See AttributeinputIntensity for more details.
(Read and Write property)

4.240.10 inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

See AttributeinputRadius for more details.
(Read and Write property)

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeScalar

4.241 class CIFilterVividLightBlendModeMBS

4.241.1 class CIFilterVividLightBlendModeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Vivid Light Blend Mode filter.
Notes: Details for this filter:

FilterName:	CIVividLightBlendMode
DisplayName English:	Vivid Light Blend Mode
DisplayName German:	Mischmethode ‚ÄûStrahlendes Licht‚Äú
DisplayName French:	Mode de fusion Lumi√®re vive
DisplayName Italian:	Modalit√† sfumatura luce vivida
DisplayName Spanish:	Modo de mezcla por luz v√vida

Categories:

- CICategoryCompositeOperation: Composite Operation

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputBackgroundImage: Background Image

Output:

- outputImage

Subclass of the CIFilterMBS class.
Blog Entries

- [MBS Xojo Plugins, version 23.0pr5](#)

4.241.2   Methods

4.241.3   Constructor

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.241.4   Properties

4.241.5   AttributeinputBackgroundImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Vivid Light Blend Mode attribute.
Notes: This attribute should have this content:

Name:	inputBackgroundImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.241.6   AttributeinputImage as CIAttributeMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: Details about the Vivid Light Blend Mode attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.241.7 inputBackgroundImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Background Image
Notes:

Name:	inputBackgroundImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Background Image
DisplayName German:	Hintergrundbild
DisplayName French:	Image d‚Äôarri√®re-plan
DisplayName Italian:	Immagine di sfondo
DisplayName Spanish:	Imagen de fondo
Type:	CIAttributeTypeImage

See AttributeinputBackgroundImage for more details.
(Read and Write property)

4.241.8 inputImage as CIImageMBS

Plugin Version: 23.0, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.242 class CIFilterVortexDistortionMBS

4.242.1 class CIFilterVortexDistortionMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Vortex Distortion filter.
Notes: Details for this filter:

FilterName:	CIVortexDistortion
DisplayName English:	Vortex Distortion
DisplayName German:	Verzerrung ‚ÄûVortex‚Äú
DisplayName French:	D√©formation Tourbillon
DisplayName Italian:	Distorsione Vortex
DisplayName Spanish:	Distorsi√n por v√rtice

Categories:

- CICategoryDistortionEffect: Distortion Effect

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputRadius: Radius

- inputAngle: Angle

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.242.2 Methods

4.242.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.242.4 Properties

4.242.5 AttributeinputAngle as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vortex Distortion attribute.
Notes: This attribute should have this content:

Name:	inputAngle
Class:	double
Type:	CIAttributeTypeAngle
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
DefaultNumber:	56.54867
IdentityNumber:	0
SliderMaxNumber:	94.24778
SliderMinNumber:	-94.24778

(Read only property)

4.242.6 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vortex Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.242.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vortex Distortion attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.242.8   AttributeinputRadius as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Vortex Distortion attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputRadius
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
DefaultNumber:	300
IdentityNumber:	0
SliderMaxNumber:	800
SliderMinNumber:	0

4.242.9   inputAngle as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Angle
Notes:

Name:	inputAngle
Class:	double (NSNumber)
DisplayName English:	Angle
DisplayName German:	Winkel
DisplayName French:	Angle
DisplayName Italian:	Angolo
DisplayName Spanish:	√Ångulo
Type:	CIAttributeTypeAngle

See AttributeinputAngle for more details.
(Read and Write property)

4.242.10   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

See AttributeinputCenter for more details.
(Read and Write property)

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

4.242.11   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.242.12   inputRadius as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Radius
Notes:

Name:	inputRadius
Class:	double (NSNumber)
DisplayName English:	Radius
DisplayName German:	Radius
DisplayName French:	Rayon
DisplayName Italian:	Raggio
DisplayName Spanish:	Radio
Type:	CIAttributeTypeDistance

See AttributeinputRadius for more details.

(Read and Write property)

4.243 class CIFilterWhitePointAdjustMBS

4.243.1 class CIFilterWhitePointAdjustMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage White Point Adjust filter.
Notes: Details for this filter:

FilterName:	CIWhitePointAdjust
DisplayName English:	White Point Adjust
DisplayName German:	Wei√üpunkt anpassen
DisplayName French:	Ajustement du point blanc
DisplayName Italian:	Regolazione punto di bianco
DisplayName Spanish:	Ajuste de punto blanco

Categories:

- CICategoryColorAdjustment: Color Adjustment

- CICategoryVideo: Video

- CICategoryStillImage: Still Image

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryHighDynamicRange: High Dynamic Range

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

- inputColor: Color

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.243.2 Methods

4.243.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.243.4 Properties

4.243.5 AttributeinputColor as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the White Point Adjust attribute.
Notes: This attribute should have this content:

Name:	inputColor
Class:	CIColorMBS
Type:	CIAttributeTypeColor
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
DefaultColor:	Red = 1, Green = 1, Blue = 1, Alpha = 1
IdentityNumber:	0

(Read only property)

4.243.6 AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the White Point Adjust attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

4.243.7 inputColor as CIColorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Color
Notes:

Name:	inputColor
Class:	CIColorMBS (CIColor)
DisplayName English:	Color
DisplayName German:	Farbe
DisplayName French:	Couleur
DisplayName Italian:	Colore
DisplayName Spanish:	Color
Type:	CIAttributeTypeColor

See AttributeinputColor for more details.
(Read and Write property)

4.243.8 inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.244   class CIFilterXRayMBS

4.244.1   class CIFilterXRayMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage X-Ray filter.
Notes: Details for this filter:

FilterName:	CIXRay
DisplayName English:	X-Ray
DisplayName German:	R√ntgen
DisplayName French:	Rayon X
DisplayName Italian:	Raggi X
DisplayName Spanish:	Rayos X

Categories:

- CICategoryColorEffect: Color Effect

- CICategoryVideo: Video

- CICategoryInterlaced: Interlaced

- CICategoryNonSquarePixels: Non-Square Pixels

- CICategoryStillImage: Still Image

- CICategoryBuiltIn: Built-In

Input:

- inputImage: Image

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.244.2   Methods

4.244.3   Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.244.4   Properties

4.244.5   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the X-Ray attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.244.6   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

See AttributeinputImage for more details.
(Read and Write property)

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

4.245   class CIFilterZoomBlurMBS

4.245.1   class CIFilterZoomBlurMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The Xojo class for the CoreImage Zoom Blur filter.
Notes: Details for this filter:

FilterName:	CIZoomBlur
DisplayName English:	Zoom Blur
DisplayName German:	Zoom weichzeichnen
DisplayName French:	Zoom flou
DisplayName Italian:	Sfumatura zoom
DisplayName Spanish:	Ampliar difuminado

Categories:

- CICategoryBlur: Blur

- CICategoryStillImage: Still Image

- CICategoryVideo: Video

- CICategoryBuiltIn: Built-In

- CICategoryHighDynamicRange: High Dynamic Range

Input:

- inputImage: Image

- inputCenter: Center

- inputAmount: Amount

Output:

- outputImage

Subclass of the CIFilterMBS class.

4.245.2 Methods

4.245.3 Constructor

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The constructor.
Notes: On success the handle property is not zero and the filter has the default values set.

4.245.4 Properties

4.245.5 AttributeinputAmount as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Zoom Blur attribute.
Notes: This attribute should have this content:

Name:	inputAmount
Class:	double
Type:	CIAttributeTypeDistance
DisplayName English:	Amount
DisplayName German:	St√§rke
DisplayName French:	Montant
DisplayName Italian:	Quantit√†
DisplayName Spanish:	Cantidad
DefaultNumber:	20
IdentityNumber:	0
SliderMaxNumber:	200
SliderMinNumber:	-200

(Read only property)

4.245.6 AttributeinputCenter as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Zoom Blur attribute.
Notes: This attribute should have this content:

(Read only property)

Name:	inputCenter
Class:	CIVectorMBS
Type:	CIAttributeTypePosition
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
DefaultVector:	[150 150]
IdentityVector:	n/a

4.245.7   AttributeinputImage as CIAttributeMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Details about the Zoom Blur attribute.
Notes: This attribute should have this content:

Name:	inputImage
Class:	CIImageMBS
Type:	CIAttributeTypeImage
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
DefaultNumber:	0
IdentityNumber:	0

(Read only property)

4.245.8   inputAmount as double

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Amount
Notes:

See AttributeinputAmount for more details.
(Read and Write property)

Name:	inputAmount
Class:	double (NSNumber)
DisplayName English:	Amount
DisplayName German:	St√§rke
DisplayName French:	Montant
DisplayName Italian:	Quantit√†
DisplayName Spanish:	Cantidad
Type:	CIAttributeTypeDistance

4.245.9   inputCenter as CIVectorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Center
Notes:

Name:	inputCenter
Class:	CIVectorMBS (CIVector)
DisplayName English:	Center
DisplayName German:	Mitte
DisplayName French:	Centre
DisplayName Italian:	Centro
DisplayName Spanish:	Centro
Type:	CIAttributeTypePosition

See AttributeinputCenter for more details.
(Read and Write property)

4.245.10   inputImage as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The attribute Image
Notes:

Name:	inputImage
Class:	CIImageMBS (CIImage)
DisplayName English:	Image
DisplayName German:	Bild
DisplayName French:	Image
DisplayName Italian:	Immagine
DisplayName Spanish:	Imagen
Type:	CIAttributeTypeImage

See AttributeinputImage for more details.
(Read and Write property)

4.246   class CIImageMBS

4.246.1   class CIImageMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The class for a CoreImage Image object.
Example:

```
// take a picture and scale it
Dim pic As Picture = LogoMBS(500)
Dim image As CIImageMBS = CIImageMBS.imageWithPicture(pic)

Dim filter As New CIFilterLanczosScaleTransformMBS

Const targetWidth = 600.0
Const targetHeight = 400.0

Dim scale As Double = targetHeight / image.Extent.Height
Dim aspect As Double = targetWidth / (image.Extent.Width * scale)

filter.inputImage = image
filter.inputScale = scale
filter.inputAspectRatio = aspect

Dim result As Picture = filter.outputImage.RenderPicture

Backdrop = result
```

Blog Entries

- News from the MBS Xojo Plugins Version 21.2

- AVCaptureVideoDataOutput improvements

- Problems with killing Xojo threads with plugin calls.

- MBS Xojo / Real Studio Plugins, version 15.0fc1

- MonkeyBread Software Releases the MBS Real Studio plug-ins in version 13.1

- Wishes for little plug-in additions?

- Multithreaded plugin functions can increase speed of Real Studio application

- MonkeyBread Software Releases the MBS Real Studio plug-ins in version 13.0

- MBS Real Studio Plugins, version 13.0fc1

- Tip of the day: Rotate image with CoreImage

Xojo Developer Magazine

4.246.2 Methods

4.246.3 AsNSImageMBS as Variant

Plugin Version: 13.0, Platform: macOS, Targets: Desktop, Console & Web.

Function: Creates a NSImageMBS which references the given CIImage.
Example:

```
// make a dummy CIImage
dim Logo as Picture = LogoMBS(500)
dim jpeg as string = PictureToJPEGStringMBS(logo, 80)
dim ci as CIImageMBS = CIImageMBS.imageWithData(jpeg)

// convert to NSImage
dim ni as NSImageMBS = ci.AsNSImageMBS

// and display
Backdrop = ni.CopyPictureWithMask
```

Notes: Returns nil on error.
Result declared as Variant to avoid plugin dependencies.

4.246.4 autoAdjustmentFilters as CIFilterMBS()

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Returns all filters that perform auto adjustment.
Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.jpg")
dim image as CIImageMBS = CIImageMBS.imageWithContentsOfFile(f)

dim filters() as CIFilterMBS = image.autoAdjustmentFilters

dim beginImage as CIImageMBS = image
for each filter as CIFilterMBS in filters
filter.ValueAsCIImage("inputImage") = beginImage
beginImage = filter.ValueAsCIImage("outputImage")
next
```

Backdrop = beginImage.RenderPicture

Notes: An array of auto adjustment filters to apply to the image. The filters are preset with values for correcting deficiencies in the supplied image.

4.246.5 autoAdjustmentFiltersWithOptions(options as dictionary) as CIFilterMBS()

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Returns a subset of the filters that perform auto adjustment.
Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.jpg")
dim image as CIImageMBS = CIImageMBS.imageWithContentsOfFile(f)

dim options as new Dictionary
options.Value(CIImageMBS.kCIImageAutoAdjustEnhance) = true
options.Value(CIImageMBS.kCIImageAutoAdjustRedEye) = true

dim filters() as CIFilterMBS = image.autoAdjustmentFiltersWithOptions(options)

dim beginImage as CIImageMBS = image
for each filter as CIFilterMBS in filters
filter.ValueAsCIImage("inputImage") = beginImage
beginImage = filter.ValueAsCIImage("outputImage")
next

Backdrop = beginImage.RenderPicture
```

Notes: options: You can control which filters are returned by supplying one or more of the keys described in "Auto Adjustment Keys."
The options dictionary can also contain a CIDetectorImageOrientation key. This key is a number with the same value as defined by the TIFF and EXIF specifications; values can range from 1 through 8. The value specifies where the origin (0,0) of the image is located. If not present, the default value is 1, which means the origin of the image is top, left. For details on the image origin specified by each value, see kCGImage-PropertyOrientation.

Returns an array of auto adjustment filters, filtered by the supplied options, to apply to the image. The filters are preset with values for correcting deficiencies in the supplied image.

4.246.6 Constructor(cgimage as CGImageMBS, cgcolorspace as CGColorSpaceMBS)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage based on a CGImage.
Notes: cgcolorspace: Use this colorspace when opening the image.
On success, the handle is not zero.
See also:

4.246.7 Constructor(cgimage as CGImageMBS, options as Dictionary = nil)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage based on a CGImage.
Notes: On success, the handle is not zero.
See also:

4.246.8 Constructor(CGLayer as CGLayerMBS, options as Dictionary = nil)

Plugin Version: 14.1, Platform: macOS, Targets: Desktop, Console & Web.

Function: Creates and returns an image object from the contents supplied by a CGLayer object, using the specified options.
Notes: layer: A CGLayer object. For more information see Quartz 2D Programming Guide and CGLayer Reference.
options: A dictionary specifying image options.

Returns an image object initialized with the contents of the layer object and set up with the specified options.
See also:

4.246.9 Constructor(data as memoryblock)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage based on the image file content stored inside the data string.
Example:

```
dim p as Picture = LogoMBS(500)
dim data as string = PictureToPNGStringMBS(p,80)
dim i as new CIImageMBS(data)

dim c as new CIFilterCircularWrapMBS
c.inputImage = i

dim o as CIImageMBS = c.outputImage
Backdrop = o.RenderPicture
```

Notes: On success, the handle is not zero.
See also:

4.246.10   Constructor(data as memoryblock, BytesPerRow as Integer, width as Integer, height as Integer, format as Integer, cgcolorspace as CGColorSpaceMBS)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage from a RAW memory buffer.
Notes: Format must be one of this constants: kCIFormatRGBAf, kCIFormatRGBA16 and kCIFormatARGB8.

On success, the handle is not zero.
See also:

4.246.11   Constructor(data as memoryblock, cgcolorspace as CGColorSpaceMBS)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage based on the image file content stored inside the data string.
Notes: cgcolorspace: Use this colorspace when opening the image.

On success, the handle is not zero.
See also:

4.246.12   Constructor(data as Memoryblock, Length as Integer, BytesPerRow as Integer, width as Integer, height as Integer, format as Integer, cgcolorspace as CGColorSpaceMBS)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage from a RAW memory buffer.
Notes: Data points directly to the row data.
Length is the size of the memoryblock in bytes.
BytesPerRow is the size of a row in bytes.
Width and height are the dimensions of the image.
Format must be one of this constants: kCIFormatRGBAf, kCIFormatRGBA16 and kCIFormatARGB8.
Colorspace is the CoreGraphics Colorspace object to be used.

On success, the handle is not zero.
See also:

4.246.13 Constructor(file as FolderItem)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage based on a the content of the file.
Notes: On success, the handle is not zero.
See also:

4.246.14   Constructor(file as FolderItem, cgcolorspace as CGColorSpaceMBS)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage based on a the content of the file.
Notes: cgcolorspace: Use this colorspace when opening the image.

On success, the handle is not zero.
See also:

4.246.15   Constructor(Handle as Integer)

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: Initializes object with given object reference.
Notes: ref should be a CIImage* and the object is retained.
Raises UnsupportedOperationException if object is not a CIImage.
See also:

4.246.16   copy as CIImageMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Creates a copy of the image.

4.246.17   CreateCGImage(r as CGRectMBS = nil) as CGImageMBS

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Creates a new image with the content of the CIImage.
Example:

dim logo as Picture = LogoMBS(500)
dim ci as CIImageMBS = CIImageMBS.imageWithPicture(logo)
dim cg as CGImageMBS = ci.CreateCGImage
Backdrop = cg.Picture

Notes: Render the region 'r' of image 'im' into a temporary buffer using the context, then create and return a new CoreGraphics image with the results.
If r is nil, the whole image extent is used.
See also:

- 4.246.18 CreateCGImage(r as CGRectMBS, ColorSpace as CGColorSpaceMBS) as CGImageMBS 1412

4.246.18   CreateCGImage(r as CGRectMBS, ColorSpace as CGColorSpaceMBS) as CGImageMBS

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Creates a new image with the content of the CIImage.
Notes: Render the region 'r' of image 'im' into a temporary buffer using the context, then create and return a new CoreGraphics image with the results.
If r is nil, the whole image extent is used.
See also:

- 4.246.17 CreateCGImage(r as CGRectMBS = nil) as CGImageMBS 1412

4.246.19 emptyImage as CIImageMBS

Plugin Version: 13.0, Platform: macOS, Targets: All.

Function: Creates and returns an empty image object.
Example:

dim image as CIImageMBS = CIImageMBS.emptyImage
MsgBox str(image.Width) // shows zero

Notes: Available in OS X v10.5 and later.

4.246.20 imageByApplyingOrientation(orientation as Integer) as CIImageMBS

Plugin Version: 15.0, Platform: macOS, Targets: All.

Function: Returns a new image representing the original image with a transform appied to it based on an orientation value.
Example:

// use CIImage to rotate to always be top left orientation
Dim ciImage As CIImageMBS = New CIImageMBS(file)

Dim orientation As Integer = ciImage.properties.Lookup("Orientation", 0)
if orientation <>0 then
ciImage = ciImage.imageByApplyingOrientation(orientation)
end if

Dim cgPic As CGImageMBS = ciImage.CreateCGImage
Dim pic As Picture = cgPic.Picture
ImageViewer1.Image = pic

Notes: Orientation values from 1 to 8 as defined in the TIFF spec are supported.
Returns original image if the image is of infinite extent.

Possible orientation values:

4.246.21 ImageByApplyingTransform(transform as NSAffineTransformMBS) as CIImageMBS

Plugin Version: 7.3, Platform: macOS, Targets: Desktop, Console & Web.

Function: Returns a new image representing the original image with the transform 'matrix' appended to

Value	orientation	details
1	top left	row 0 top, col 0 lhs
2	top right	row 0 top, col 0 rhs
3	bottom right	row 0 bottom, col 0 rhs
4	bottom left	row 0 bottom, col 0 lhs
5	left top	row 0 lhs, col 0 top
6	right top	row 0 rhs, col 0 top
7	right bottom	row 0 rhs, col 0 bottom
8	left bottom	row 0 lhs, col 0 bottom

it.

4.246.22 imageByClampingToExtent as CIImageMBS

Plugin Version: 15.0, Platform: macOS, Targets: All.

Function: Return a new infinte image by replicating the pixels of the receiver image's extent.

4.246.23 imageByCompositingOverImage(dest as CIImageMBS) as CIImageMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Returns a new image created by compositing the original image over the specified destination image.
Notes: dest: An image to serve as the destination of the compositing operation.

Returns an image object representing the result of the compositing operation.

Calling this method is equivalent to using the CISourceOverCompositing filter. To use other compositing operations and blending modes, create a CIFilter object using one of the built-in filters from the CICategoryCompositeOperation category. For details, see Core Image Filter Reference.

Available in OS X v10.4 and later.

4.246.24 imageByCroppingToRect(r as CGRectMBS) as CIImageMBS

Plugin Version: 13.0, Platform: macOS, Targets: All.

Function: Returns a new image that represents the original image after cropping to a rectangle.

Notes: Available in OS X v10.5 and later.

4.246.25   imageWithCGImage(CGImage as CGImageMBS, colorspace as CG-ColorSpaceMBS) as CIImageMBS

Plugin Version: 13.0, Platform: macOS, Targets: All.

Function: Creates and returns an image object from a Quartz 2D image using the specified color space.
Notes: Returns nil on any error.
See also:

- 4.246.26 imageWithCGImage(CGImage as CGImageMBS, options as Dictionary = nil) as CIImageMBS   1415

4.246.26   imageWithCGImage(CGImage as CGImageMBS, options as Dictionary = nil) as CIImageMBS

Plugin Version: 13.0, Platform: macOS, Targets: All.

Function: Creates and returns an image object from a Quartz 2D image.
Notes: Returns nil on any error.
See also:

- 4.246.25 imageWithCGImage(CGImage as CGImageMBS, colorspace as CGColorSpaceMBS) as CIImageMBS   1415

4.246.27   imageWithCGLayer(CGImage as CGImageMBS, options as Dictionary = nil) as CIImageMBS

Plugin Version: 14.1, Platform: macOS, Targets: Desktop, Console & Web.

Function: Creates and returns an image object from the contents supplied by a CGLayer object, using the specified options.
Notes: layer: A CGLayer object. For more information see Quartz 2D Programming Guide and CGLayer Reference.
options: A dictionary specifying image options.

An image object initialized with the contents of the layer object and set up with the specified options.

4.246.28   imageWithColor(color as CIColorMBS) as CIImageMBS

Plugin Version: 13.0, Platform: macOS, Targets: All.

Function: Creates and returns an image of infinite extent that is initialized the specified color.
Notes: Returns the image object initialized with the color represented by the CIColorMBS object.
Available in OS X v10.5 and later.

4.246.29   imageWithContentsOfFile(file as folderitem) as CIImageMBS

Plugin Version: 13.0, Platform: macOS, Targets: All.

Function: Creates and returns an image object from the contents of a file.
Example:

dim file as FolderItem = SpecialFolder.Desktop.Child("mbs.jpg")
dim image as CIImageMBS = CIImageMBS.imageWithContentsOfFile(file)
Backdrop = image.RenderPicture

Notes: Returns nil on any error.
See also:

- 4.246.30 imageWithContentsOfFile(file as folderitem, colorspace as CGColorSpaceMBS) as CIImageMBS 1416

4.246.30   imageWithContentsOfFile(file as folderitem, colorspace as CGColorSpaceMBS) as CIImageMBS

Plugin Version: 13.0, Platform: macOS, Targets: All.

Function: Creates and returns an image object from the contents of a file.
Notes: Returns nil on any error.
See also:

- 4.246.29 imageWithContentsOfFile(file as folderitem) as CIImageMBS 1416

4.246.31   imageWithContentsOfFileMT(file as folderitem) as CIImageMBS

Plugin Version: 13.0, Platform: macOS, Targets: All.

Function: Creates and returns an image object from the contents of a file.
Example:

dim file as FolderItem = SpecialFolder.Desktop.Child("mbs.jpg")
dim image as CIImageMBS = CIImageMBS.imageWithContentsOfFileMT(file)
Backdrop = image.RenderPicture

Notes: Returns nil on any error.

The work is performed on a preemptive thread, so this function does not block the application and can yield time to other Xojo threads. Must be called in a Xojo thread to enjoy benefits. If called in main thread will block, but keep other background threads running.
If you run several threads calling MT methods, you can get all CPU cores busy while main thread shows GUI with progress window.
See also:

- 4.246.32 imageWithContentsOfFileMT(file as folderitem, colorspace as CGColorSpaceMBS) as CIImageMBS 1417

4.246.32 imageWithContentsOfFileMT(file as folderitem, colorspace as CGColorSpaceMBS) as CIImageMBS

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Creates and returns an image object from the contents of a file.
Example:

dim file as FolderItem = SpecialFolder.Desktop.Child("mbs.jpg")
dim cs as CGColorSpaceMBS = CGColorSpaceMBS.CreateDeviceRGB
dim image as CIImageMBS = CIImageMBS.imageWithContentsOfFileMT(file, cs)
Backdrop = image.RenderPicture

Notes: Returns nil on any error.

The work is performed on a preemptive thread, so this function does not block the application and can yield time to other Xojo threads. Must be called in a Xojo thread to enjoy benefits. If called in main thread will block, but keep other background threads running.
If you run several threads calling MT methods, you can get all CPU cores busy while main thread shows GUI with progress window.
See also:

- 4.246.31 imageWithContentsOfFileMT(file as folderitem) as CIImageMBS 1416

4.246.33 imageWithContentsOfPath(Path as string, colorspace as CGColorSpaceMBS) as CIImageMBS

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Creates and returns an image object from the contents of a file.
Example:

```
// load image
dim inputimage as CIImageMBS = CIImageMBS.imageWithContentsOfPath("/Library/Desktop Pictures/Rice
Paddy.jpg", nil)

// rotate 90¬∞
dim ScaleXFilter as new CIFilterAffineTransformMBS
ScaleXFilter.inputImage = inputimage
dim af as new NSAffineTransformMBS
af.translate(inputimage.height,0)
af.rotateByDegrees(90)
ScaleXFilter.inputTransform=af

// produce output
dim outputimage as CIImageMBS = ScaleXFilter.outputImage
dim e as CGRectMBS = outputimage.Extent
Backdrop = outputimage.RenderPicture
Title = Str(Backdrop.Width)+" x "+str(Backdrop.Height)

// write to PNG file
dim n as NSImageMBS = outputimage.AsNSImageMBS
dim data as string = n.PNGRepresentation

dim f as FolderItem = SpecialFolder.Desktop.Child("test.png")
dim b as BinaryStream = BinaryStream.Create(f, true)
b.Write data
b.Close
```

Notes: Returns nil on any error.

4.246.34   imageWithContentsOfURL(url as String) as CIImageMBS

Plugin Version: 13.0, Platform: macOS, Targets: All.

Function: Creates and returns an image object from the contents of a file.
Notes: Returns nil on any error.
See also:

- 4.246.35 imageWithContentsOfURL(URL as string, colorspace as CGColorSpaceMBS) as CIImageMBS
  1418

4.246.35   imageWithContentsOfURL(URL as string, colorspace as CGColorSpaceMBS) as CIImageMBS

Plugin Version: 13.0, Platform: macOS, Targets: All.

Function: Creates and returns an image object from the contents of a file.
Notes: Returns nil on any error.
See also:

4.246.36   imageWithData(data as memoryblock, Options as Dictionary = nil) as CIImageMBS

Plugin Version: 13.0, Platform: macOS, Targets: All.

Function: Creates and returns an image object initialized with the supplied image data.
Example:

dim logo as Picture = LogoMBS(500)
dim jpegData as string = PictureToJPEGStringMBS(logo, 75)
dim image as CIImageMBS = CIImageMBS.imageWithData(jpegData)
Backdrop = image.RenderPicture

Notes: data: The data object that holds the contents of an image file (such as TIFF, GIF, JPG, or whatever else the system supports). The image data must be premultiplied.

Returns an image object initialized with the supplied data, or nil if the method cannot create an image representation from the contents of the supplied data object.

4.246.37   imageWithDataMT(data as memoryblock, Options as Dictionary = nil) as CIImageMBS

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Creates and returns an image object initialized with the supplied image data.
Example:

dim logo as Picture = LogoMBS(500)
dim jpegData as string = PictureToJPEGStringMBS(logo, 75)
dim image as CIImageMBS = CIImageMBS.imageWithDataMT(jpegData)
Backdrop = image.RenderPicture

Notes: data: The data object that holds the contents of an image file (such as TIFF, GIF, JPG, or whatever else the system supports). The image data must be premultiplied.

Returns an image object initialized with the supplied data, or nil if the method cannot create an image

representation from the contents of the supplied data object.

The work is performed on a preemptive thread, so this function does not block the application and can yield time to other Xojo threads. Must be called in a Xojo thread to enjoy benefits. If called in main thread will block, but keep other background threads running.
If you run several threads calling MT methods, you can get all CPU cores busy while main thread shows GUI with progress window.

4.246.38   imageWithPicture(Pic as Picture) as CIImageMBS

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: Creates and returns an image object from a Xojo Picture.
Example:

dim logo as Picture = LogoMBS(500)
dim ci as CIImageMBS = CIImageMBS.imageWithPicture(logo)
dim cg as CGImageMBS = ci.CreateCGImage
Backdrop = cg.Picture

Notes: Returns nil on any error.

4.246.39   kCIImageAutoAdjustCrop as string

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: A key used to specify whether to return a filter that crops the image to focus on detected features.
Notes: The value associated with this key is a Boolean value. If true, the returned filters include an operation that crops the image around the features specified with the kCIImageAutoAdjustFeatures option (or any features detected in the image, if that option is not present). Supply false to indicate not to return a crop filter. If you don‚Äôt specify this option, Core Image assumes its value is false.

Available in OS X v10.10 and later.

4.246.40   kCIImageAutoAdjustEnhance as string

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: One of the Keys used in the options dictionary to control which filters Core Image returns.
Notes: A key used to specify whether to return enhancement filters.
The value associated with this key is a CFBoolean value. Supply false to indicate not to return enhancement

filters. If you don't specify this option, Core Image assumes its value is true.

4.246.41 kCIImageAutoAdjustFeatures as string

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: One of the Keys used in the options dictionary to control which filters Core Image returns.
Notes: A key used to specify an array of features to which to apply enhancement and red eye filter.
The associated value is an array of CIFeatureMBS objects. If you don't supply an array, the receiver will search for features using the CIDetectorMBS class.

4.246.42 kCIImageAutoAdjustLevel as string

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: A key used to specify whether to return a filter that rotates the image to keep a level perspective.
Notes: The value associated with this key is a Boolean value. If true, Core Image analyzes the image to determine whether it would benefit from rotation—for example, a landscape photo in which the horizon is not horizontal—and returns a filter to perform that rotation. Supply false to indicate not to return a rotation filter. If you don‚Äôt specify this option, Core Image assumes its value is false.

Available in OS X v10.10 and later.

4.246.43 kCIImageAutoAdjustRedEye as string

Plugin Version: 13.1, Platform: macOS, Targets: All.

Function: One of the Keys used in the options dictionary to control which filters Core Image returns.
Notes: A key used to specify whether to return a red eye filter.
The value associated with this key is a Boolean value. Supply false to indicate not to return a red eye filter.
If you don't specify this option, Core Image assumes its value is true.

4.246.44 kCIImageTextureFormat as string

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: One of the keys in the options dictionary when initializing an image.
Notes: The key for an OpenGL texture format. The value for this key must be an NSNumber object containing a Core Image pixel format constant. (See "Pixel Formats.") You may only use this key when initializing an image using the initWithTexture method.

Available in OS X v10.9 and later.

4.246.45 kCIImageTextureTarget as string

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: One of the keys in the options dictionary when initializing an image.
Notes: The key for an OpenGL texture target. The value for this key must be an NSNumber object containing a supported OpenGL texture target constant, either GL_TEXTURE_2D or GL_TEXTURE_RECTANGLE_ARB. You may only use this key when initializing an image using the initWithTexture method.
Available in OS X v10.9 and later.

4.246.46 properties as Dictionary

Plugin Version: 13.0, Platform: macOS, Targets: All.

Function: Returns the metadata properties of an image.
Notes: If the image is the output of one or more CIFilters, then the metadata of the root inputImage will be returned.

4.246.47 releaseHandle

Plugin Version: 14.2, Platform: macOS, Targets: All.

Function: Decrements the retain count of a CIImage reference.
Notes: Each retain must have a release. Too many releases and your app will crash, too many retains and it will leak memory.
Use only if you really know what you are doing.

4.246.48 RenderNSImage(UseSoftwareRenderer as boolean = false) as Variant

Plugin Version: 7.3, Platform: macOS, Targets: Desktop, Console & Web.

Function: Creates a picture based of the CIImage content.
Example:

dim f as CIFilterEdgesMBS

f=new CIFilterEdgesMBS
f.inputImage=NewCIImagewithFileMBS(SpecialFolder.Desktop.Child("Paris.jpg"))
f.inputIntensity=5

dim n as NSImageMBS
n=f.outputImage.RenderNSImage(false)

Notes: Creates a new NSImage, creates a CGContext for it, draws the image into the buffer and returns it as a Xojo object.

Returns nil on failure.
Rendering the image will cause the calculations to be done so this call is quite expensive.

If UseSoftwareRenderer is true, the hardware acceleration is not used.

4.246.49 RenderPicture(Width as Integer = 0, Height as Integer = 0, UseSoftwareRenderer as boolean = false) as Picture

Plugin Version: 7.3, Platform: macOS, Targets: Desktop only.

Function: Creates a picture based of the CIImage content.
Example:

dim f as CIFilterEdgesMBS

f=new CIFilterEdgesMBS
f.inputImage=NewCIImagewithFileMBS(SpecialFolder.Desktop.Child("Paris.jpg"))
f.inputIntensity=5
Backdrop=f.outputImage.RenderPicture

Notes: Creates a new image buffer, creates a CGContext for it, draws the image into the buffer and returns it as a picture with mask. If you need picture with alpha channel, please use RenderPictureWithAlpha function.

Returns nil on failure.
Rendering the image will cause the calculations to be done so this call is quite expensive.

If UseSoftwareRenderer is true, the hardware acceleration is not used.

4.246.50 RenderPictureWithAlpha(Width as Integer = 0, Height as Integer = 0, UseSoftwareRenderer as boolean = false) as Picture

Plugin Version: 15.0, Platform: macOS, Targets: Desktop only.

Function: Creates a picture based of the CIImage content.
Example:

dim f as CIFilterEdgesMBS

f=new CIFilterEdgesMBS
f.inputImage=NewCIImagewithFileMBS(SpecialFolder.Desktop.Child("Paris.jpg"))
f.inputIntensity=5
Backdrop= f.outputImage.RenderPictureWithAlphaMT

Notes: Creates a new image buffer, creates a CGContext for it, draws the image into the buffer and returns it as a Xojo picture with alpha channel.

Returns nil on failure.
Rendering the image will cause the calculations to be done so this call is quite expensive.

If UseSoftwareRenderer is true, the hardware acceleration is not used.

4.246.51   RenderPictureWithAlphaMT(Width as Integer = 0, Height as Integer = 0, UseSoftwareRenderer as boolean = false) as Picture

Plugin Version: 15.1, Platform: macOS, Targets: Desktop only.

Function: Creates a picture based of the CIImage content.
Notes: Same as the other RenderPictureWithAlpha function, but threaded.

Creates a new image buffer, creates a CGContext for it, draws the image into the buffer and returns it as a Xojo picture with alpha channel.

Returns nil on failure.
Rendering the image will cause the calculations to be done so this call is quite expensive.

If UseSoftwareRenderer is true, the hardware acceleration is not used.

The work is performed on a preemptive thread, so this function does not block the application and can yield time to other Xojo threads. Must be called in a Xojo thread to enjoy benefits. If called in main thread will block, but keep other background threads running.
If you run several threads calling MT methods, you can get all CPU cores busy while main thread shows GUI with progress window.

4.246.52   retainHandle

Plugin Version: 14.2, Platform: macOS, Targets: All.

Function: Increments the retain count of a CIImage reference.
Notes: Each retain must have a release. Too many releases and your app will crash, too many retains and it will leak memory.
Use only if you really know what you are doing.

4.246.53   scaleTo(width as Integer, height as Integer) as CIImageMBS

Plugin Version: 21.2, Platform: macOS, Targets: All.

Function: Scales picture to target size.
Example:

Dim pic As Picture = LogoMBS(500)
Dim image As CIImageMBS = CIImageMBS.imageWithPicture(pic)

Const targetWidth = 600.0
Const targetHeight = 400.0

#If mbs.VersionNumber <21.2 Then

Dim filter As New CIFilterLanczosScaleTransformMBS

Dim scale As Double = targetHeight / image.Extent.Height
Dim aspect As Double = targetWidth / (image.Extent.Width * scale)

filter.inputImage = image
filter.inputScale = scale
filter.inputAspectRatio = aspect

Dim outputImage As CIImageMBS = filter.outputImage

#Else

Dim outputImage As CIImageMBS = image.scaleTo(targetWidth, targetHeight)

#EndIf

Dim result As Picture = outputImage.RenderPicture
Backdrop = result

Notes: We use CILanczosScaleTransform filter internally like in the example code for older plugin versions.

4.246.54   Properties

4.246.55   colorSpace as CGColorSpaceMBS

Plugin Version: 13.0, Platform: macOS, Targets: All.

Function: Returns if possible the color space of the image it was defined in.
Notes: This method will return nil, if the color space cannot be determined.
(Read only property)

4.246.56   Definition as CIFilterShapeMBS

Plugin Version: 7.3, Platform: macOS, Targets: Desktop, Console & Web.

Function: Return the Domain of Definition of the image.
Notes: Nil on any error.
(Read only property)

4.246.57   description as String

Plugin Version: 9.7, Platform: macOS, Targets: All.

Function: Returns the textual description for this image.
Example:

dim p as Picture = LogoMBS(500)
dim data as string = PictureToPNGStringMBS(p,80)
dim i as new CIImageMBS(data)
MsgBox i.description

Notes: (Read only property)

4.246.58   Extent as CGRectMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The extent of the image in world coordinates.
Example:

dim f as FolderItem = SpecialFolder.Desktop.Child("test.jpg")

dim i as new CIImageMBS(f)
dim r as CGRectMBS = i.Extent

MsgBox str(r.Width)+" x "+str(r.Height)

Notes: Can be undefined. In that case x/y are -Infinity and width/height are Infinity (3.402823466 * 10^38).
(Read only property)

4.246.59 Handle as Integer

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: The handle to the CIImage object used internally.
Notes: (Read only property)

4.246.60 Height as Double

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: The height of the image in pixel.
Notes: (Read only property)

4.246.61 RetainCount as Integer

Plugin Version: 14.2, Platform: macOS, Targets: All.

Function: Returns the retain count of the CIImage reference.
Notes: This is useful for debugging.
The retain count is for the CIImage reference, not the CIImageMBS object.
(Read only property)

4.246.62 url as string

Plugin Version: 13.0, Platform: macOS, Targets: All.

Function: Returns the URL of a file based image.
Notes: Returns the URL of the image when the image was created using the imageWithContentsOfURL

APIs.
This method will return nil, if the URL cannot be determined.
(Read only property)

4.246.63   Width as Double

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: The width of the image in pixel.
Notes: (Read only property)

4.246.64   Constants

Constants

Constant	Value	Description
kCIFormatARGB8	23	One of the pixel formats: 32bpp, fixed point.
kCIFormatRGBA16	27	One of the pixel formats: 64bpp, fixed point.
kCIFormatRGBAf	34	One of the pixel formats: 128bpp, floating point.

4.247 class CIPDF417CodeDescriptorMBS

4.247.1 class CIPDF417CodeDescriptorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: CIPDF417CodeDescriptor is a concrete subclass of CIBarcodeDescriptor that defines an abstract representation of a PDF417 code symbol.
Notes: Refer to the ISO/IEC 15438:2006(E) for the PDF417 symbol specification.
Subclass of the CIBarcodeDescriptorMBS class.

4.247.2 Methods

4.247.3 Constructor(errorCorrectedPayload as MemoryBlock, isCompact as Boolean, rowCount as Integer, columnCount as Integer)

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Initializes a descriptor that can be used as input to CIBarcodeGenerator

4.247.4 descriptorWithPayload(errorCorrectedPayload as MemoryBlock, isCompact as Boolean, rowCount as Integer, columnCount as Integer) as CIPDF417CodeDescriptorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Construct a descriptor that can be used as input to CIBarcodeGenerator

4.247.5 Properties

4.247.6 columnCount as Integer

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Indicates the number of columns in the rectangular matrix, excluding the columns used to indicate the symbol structure.
Notes: columnCount values range from 1 to 30.
(Read only property)

4.247.7   errorCorrectedPayload as MemoryBlock

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The error-corrected codewords which comprise the PDF417 symbol. The first codeword indicates the number of data codewords in the errorCorrectedPayload.
Notes: PDF417 codes are comprised of a start character on the left and a stop character on the right. Each row begins and ends with special characters indicating the current row as well as information about the dimensions of the PDF417 symbol. The errorCorrectedPayload represents the sequence of PDF417 codewords that make up the body of the message. The first codeword indicates the number of codewords in the message. This count includes the "count" codeword and any padding codewords, but does not include the error correction codewords. Each codeword is a 16-bit value in the range of 0...928. The sequence is to be interpreted as described in the PDF417 bar code symbology specification – ISO/IEC 15438:2006(E).
(Read only property)

4.247.8   isCompact as Boolean

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: A boolean indicating whether the symbol is compact.
Notes: Compact PDF417 symbols have abbreviated right-side guard bars.
(Read only property)

4.247.9   rowCount as Integer

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Indicates the number of rows in the rectangular matrix.
Notes: rowCount values range from 3 to 90.
(Read only property)

4.248   class CIQRCodeDescriptorMBS

4.248.1   class CIQRCodeDescriptorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: CIQRCodeDescriptor is a concrete subclass of CIBarcodeDescriptor that defines an abstract representation of a QR code symbol.
Notes: Subclass of the CIBarcodeDescriptorMBS class.

4.248.2   Methods

4.248.3   Constructor(errorCorrectedPayload as MemoryBlock, symbolVersion as Integer, maskPattern as Integer, errorCorrectionLevel as Integer)

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Initializes a descriptor that can be used as input to CIBarcodeGenerator.

4.248.4   descriptorWithPayload(errorCorrectedPayload as MemoryBlock, symbolVersion as Integer, maskPattern as Integer, errorCorrectionLevel as Integer) as CIQRCodeDescriptorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: Construct a descriptor that can be used as input to CIBarcodeGenerator.

4.248.5   Properties

4.248.6   errorCorrectedPayload as MemoryBlock

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The error-corrected codewords that comprise the QR code symbol.
Notes: QR Codes are formally specified in ISO/IEC 18004:2006(E). Section 6.4.10 "Bitstream to codeword conversion" specifies the set of 8-bit codewords in the symbol immediately prior to splitting the message into blocks and applying error correction.

During decode, error correction is applied and if successful, the message is re-ordered to the state immediately following "Bitstream to codeword coversion." The errorCorrectedPayload corresponds to this sequence of 8-bit codewords.

(Read only property)

4.248.7   errorCorrectionLevel as Integer

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The error correction level of the QR code.
Notes: QR Codes support four levels of Reed-Solomon error correction, in increasing error correction capability: L, M, Q, and H.
(Read only property)

4.248.8   maskPattern as Integer

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The data mask pattern for the QR code symbol.
Notes: QR Codes support eight data mask patterns, which are used to avoid large black or large white areas inside the symbol body. Valid values range from 0 to 7.
(Read only property)

4.248.9   symbolVersion as Integer

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The version property corresponds to the size of the QR Code.
Notes: QR Codes are square. ISO/IEC 18004 defines versions from 1 to 40, where a higher symbol version indicates a larger data carrying capacity. This field is required in order to properly interpret the error corrected payload.
(Read only property)

4.248.10   Constants

Error Correction

Constant	Value	Description
ErrorCorrectionLevelH	72	Indicates that approximately 65% of the symbol data is dedicated to error correction.
ErrorCorrectionLevelL	76	Indicates that approximately 20% of the symbol data is dedicated to error correction.
ErrorCorrectionLevelM	77	Indicates that approximately 37% of the symbol data is dedicated to error correction.
ErrorCorrectionLevelQ	81	Indicates that approximately 55% of the symbol data is dedicated to error correction.

4.249   class CIQRCodeFeatureMBS

4.249.1   class CIQRCodeFeatureMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The feature for a detected QRCode.
Notes: A CIQRCodeFeature describes a Quick Response code (a two-dimensional barcode using the ISO/IEC 18004:2006 standard) detected in a video or still image. The properties of a QR code feature identify the corners of the barcode as it appears in perspective in the image and provide the message decoded from the barcode.

To detect QR codes in an image or video, choose the CIDetectorTypeQRCode type when initializing a CIDetector object.
Subclass of the CIFeatureMBS class.

4.249.2   Methods

4.249.3   Constructor(Handle as Integer)

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Initializes an object using the given handle.

4.249.4   Properties

4.249.5   bottomLeft as CGPointMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The lower left corner of the detected barcode, in image coordinates.
Notes: (Read only property)

4.249.6   bottomRight as CGPointMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The lower right corner of the detected barcode, in image coordinates.
Notes: (Read only property)

4.249.7 messageString as string

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The string decoded from the detected barcode.
Notes: (Read only property)

4.249.8 symbolDescriptor as CIQRCodeDescriptorMBS

Plugin Version: 17.4, Platform: macOS, Targets: All.

Function: The QRCode symbol descriptor.
Notes: Available on macOS 10.13 or newer.
(Read only property)

4.249.9 topLeft as CGPointMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The upper left corner of the detected barcode, in image coordinates.
Notes: (Read only property)

4.249.10 topRight as CGPointMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The upper right corner of the detected barcode, in image coordinates.
Notes: (Read only property)

4.250   class CIRectangleFeatureMBS

4.250.1   class CIRectangleFeatureMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: A CIRectangleFeature object describes a quadrilateral region detected in a video or still image.
Notes: A detected rectangle feature is not necessarily rectangular in the plane of the image; rather, the feature identifies a shape that may be rectangular in space but which appears in perspective in the image—for example, a paper or book on a desk. The properties of a rectangle feature identify its corners in image coordinates.

For example, you can use rectangle feature detection together with the CIPerspectiveCorrection filter to detect rectangular objects in an image or video and transform them to their original orientation.

To detect rectangles in an image or video, choose the CIDetectorTypeRectangle type when initializing a CIDetector object, and use the CIDetectorAspectRatio option to specify the approximate shape of rectangular features to search for.
Subclass of the CIFeatureMBS class.

4.250.2   Methods

4.250.3   Constructor(Handle as Integer)

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Creates a new object from a handle.

4.250.4   Properties

4.250.5   bottomLeft as CGPointMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The lower left corner of the detected rectangle, in image coordinates.
Notes: (Read only property)

4.250.6   bottomRight as CGPointMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The lower right corner of the detected rectangle, in image coordinates.
Notes: (Read only property)

4.250.7   topLeft as CGPointMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The upper left corner of the detected rectangle, in image coordinates.
Notes: (Read only property)

4.250.8   topRight as CGPointMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The upper right corner of the detected rectangle, in image coordinates.
Notes: (Read only property)

4.251   class CISamplerMBS

4.251.1   class CISamplerMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The Xojo class to wrap a CoreImage sampler.

4.251.2   Methods

4.251.3   Constructor(ciImage as CIImageMBS)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new sampler based on the given image.
Notes: On success handle will not be 0.
See also:

4.251.4   Constructor(ciImage as CIImageMBS, matrix as NSAffineTransformMBS, WrapMode as String, FilterMode as string)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new sampler based on the given image.
Notes:

matrix:	An affine transformation [a b c d tx ty] defining the transformation to be applied to the sampler.
wrapmode:	A string defining how pixels outside the sampler's extent are produced. Options include kCISamplerWrapBlack (pixels are transparent black, the default) and kCISamplerWrapClamp (coordinates are clamped to the extent).
FilterMode:	A string defining the filter to use when sampling the image. One of kCISamplerFilterNearest (point sampling) or kCISamplerFilterLinear (bilinear interpolation, the default).

On success handle will not be 0.
See also:

4.251.5 Constructor(Handle as Integer)

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: Initializes object with given object reference.
Notes: ref should be a CISampler* and the object is retained.
Raises UnsupportedOperationException if object is not a CISampler.
See also:

4.251.6 copy as CISamplerMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Creates a copy of the sampler.

4.251.7 kCISamplerAffineMatrix as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the option keys for creating a sampler.
Notes: The key for an affine matrix. The associated value is an NSArray object ([a b c d tx ty]) that defines the transformation to apply to the sampler.

Available in OS X v10.4 and later.

4.251.8 kCISamplerColorSpace as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the option keys for creating a sampler.
Notes: The key for the color space to use when sampling the image. The associated value must be an RGB CGColorSpaceRef object. Using this option specifies that samples should be converted to this color space before being passed to a kernel. If not specified, samples will be passed to the kernel in the working color

space of the Core Image context used to render the image.

Available in OS X v10.4 and later.

4.251.9   kCISamplerFilterLinear as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the values for filter modes.
Notes: Bilinear interpolation.

4.251.10   kCISamplerFilterMode as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the option keys for creating a sampler.
Notes: The key for the filtering to use when sampling the image. Possible values are kCISamplerFilterNearest and kCISamplerFilterLinear.

Available in OS X v10.4 and later.

4.251.11   kCISamplerFilterNearest as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the values for filter modes.
Notes: Nearest neighbor sampling.

4.251.12   kCISamplerWrapBlack as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the values for wrap modes.
Notes: Pixels are transparent black.

4.251.13   kCISamplerWrapClamp as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the values for wrap modes.
Notes: Coordinates are clamped to the extent.

4.251.14   kCISamplerWrapMode as String

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: One of the option keys for creating a sampler.
Notes: The key for the sampler wrap mode. The wrap mode specifies how Core Image produces pixels that are outside the extent of the sample. Possible values are kCISamplerWrapBlack and kCISamplerWrapClamp.

Available in OS X v10.4 and later.

4.251.15   samplerWithImage(ciImage as CIImageMBS) as CISamplerMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Creates and returns a sampler that references an image.
Notes: A sampler object that references the image specified by the ciImage argument.
See also:

- 4.251.16 samplerWithImage(ciImage as CIImageMBS, matrix as NSAffineTransformMBS, WrapMode as String, FilterMode as string) as CISamplerMBS   1441

- 4.251.17 samplerWithImage(ciImage as CIImageMBS, Options as Dictionary) as CISamplerMBS 1442

4.251.16   samplerWithImage(ciImage as CIImageMBS, matrix as NSAffineTransformMBS, WrapMode as String, FilterMode as string) as CISamplerMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Creates a new sampler based on the given image.
Notes:

On success handle will not be nil.
See also:

- 4.251.15 samplerWithImage(ciImage as CIImageMBS) as CISamplerMBS   1441

- 4.251.17 samplerWithImage(ciImage as CIImageMBS, Options as Dictionary) as CISamplerMBS 1442

matrix: An affine transformation [a b c d tx ty] defining the transformation to be
                  applied to the sampler.
wrapmode: A string defining how pixels outside the sampler's extent are produced. Options
                  include kCISamplerWrapBlack (pixels are transparent black, the default) and
                  kCISamplerWrapClamp (coordinates are clamped to the extent).
FilterMode: A string defining the filter to use when sampling the image. One of kCISam-
                  plerFilterNearest (point sampling) or kCISamplerFilterLinear (bilinear inter-
                  polation, the default).

4.251.17   samplerWithImage(ciImage as CIImageMBS, Options as Dictionary) as CISamplerMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Creates and returns a sampler that references an image using options specified in a dictionary.
Notes: See kCISampler* shared methods for constants.
See also:

4.251.18   Properties

4.251.19   Definiton as CIFilterShapeMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Returns the shape containing the Domain Of Definition (DOD) of the sampler.
Notes: The DOD is defined such that it contains all non-transparent pixels produced by referencing the sampler.
(Read only property)

4.251.20   description as String

Plugin Version: 9.7, Platform: macOS, Targets: All.

Function: Returns the textual description for this sampler.
Notes: (Read only property)

4.251.21 Extent as CGRectMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Returns the extent of the sampler.
Notes: Sampling outside the extent will bring the sampler's wrap mode into action.

Returns nil on any error.
(Read only property)

4.251.22 Handle as Integer

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: The handle to the internal used CISampler reference.
Notes: (Read only property)

4.252   class CITextFeatureMBS

4.252.1   class CITextFeatureMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The class for a text feature.
Notes: A CITextFeature object describes a quadrilateral region likely to contain upright text detected in a video or still image. The properties of a text feature identify its corners in image coordinates.

Use this class to locate areas of text within an image—for example, to extract and perspective-correct those portions of the image before performing your own optical character recognition or other processing tasks.

To detect rectangles in an image or video, choose the CIDetectorTypeText type when initializing a CIDetector object, and use the CIDetectorImageOrientation option to specify the desired orientation for finding upright text.
Subclass of the CIFeatureMBS class.

4.252.2   Methods

4.252.3   Constructor(Handle as Integer)

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The constructor to create an object from a handle.

4.252.4   subFeatures as CIFeatureMBS()

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: An array containing additional features detected within the feature.
Notes: A text detector can identify both a major region that is likely to contain text as well as the areas within that region that likely to contain individual text features. Such features might be single characters, groups of closely-packed characters, or entire words.

Core Image populates this array only if you enable the CIDetectorReturnSubFeatures option when retrieving features.

4.252.5 Properties

4.252.6 bottomLeft as CGPointMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The lower left corner of the detected text region, in image coordinates.
Notes: (Read only property)

4.252.7 bottomRight as CGPointMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The lower right corner of the detected text region, in image coordinates.
Notes: (Read only property)

4.252.8 topLeft as CGPointMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The upper left corner of the detected text region, in image coordinates.
Notes: (Read only property)

4.252.9 topRight as CGPointMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: The upper right corner of the detected text region, in image coordinates.
Notes: (Read only property)

4.253 class CIVectorMBS

4.253.1 class CIVectorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: A class for a vector in the CoreImage world.
Notes: May contain one to four floating point values.
Blog Entries

- Tip of day: Gradients with CoreImage Filter

- MBS Xojo / Real Studio Plugins, version 16.0pr6

- MBS Real Studio Plugins, version 12.1pr5

4.253.2 Methods

4.253.3 CGAffineTransformValue as CGAffineTransformMBS

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: Returns the values stored in the CIVector object as an affine transform.
Example:

dim p as new CGAffineTransformMBS
dim v as new CIVectorMBS(p)
dim x as CGAffineTransformMBS = v.CGAffineTransformValue
MsgBox str(x.A)+" "+str(x.B)+" "+str(x.C)+" "+str(x.D)+" "+str(x.TX)+" "+str(x.TY)

Notes: The first six values in the vector become the values that comprise the affine transform.
Available in OS X v10.9 and later.

4.253.4 CGPointValue as CGPointMBS

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: Returns the values stored in the CIVector object as a point.
Example:

dim p as new CGPointMBS(10, 20)
dim v as CIVectorMBS = CIVectorMBS.vectorWithCGPoint(p)

dim x as CGPointMBS = v.CGPointValue
MsgBox str(x.x)+" "+str(x.y)

Notes: The vector's X and Y property values become the CGPoint's X and Y values.
Available in OS X v10.9 and later.

4.253.5 CGRectValue as CGRectMBS

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: Returns the values stored in the CIVector object as an rect.
Example:

dim p as new CGRectMBS(10, 20, 30, 40)
dim v as CIVectorMBS = CIVectorMBS.vectorWithCGRect(p)

dim x as CGRectMBS = v.CGRectValue
MsgBox str(x.Origin.X)+" "+str(x.Origin.y)+" "+str(x.Size.Width)+" "+str(x.Size.Height)

Notes: The vector's X, Y, Z and W property values become the CGRect's X, Y, height and width values.
Available in OS X v10.9 and later.

4.253.6 Constructor(Handle as Integer)

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: Initializes object with given object reference.
Notes: ref should be a CIVector* and the object is retained.
Raises UnsupportedOperationException if object is not a CIVector.
See also:

4.253.7   Constructor(p as CGPointMBS)

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: Initializes a vector that is initialized with values provided by a CGPoint.
Example:

dim p as new CGPointMBS(10, 20)
dim v as new CIVectorMBS(p)

MsgBox str(v.x)+" "+str(v.y)

Notes: The CGPoint's X and Y values are stored in the vector's X and Y properties.
Available in OS X v10.9 and later.
See also:

4.253.8   Constructor(r as CGRectMBS)

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: Initializes a vector that is initialized with values provided by a CGRect.
Example:

dim p as new CGRectMBS(10, 20, 30, 40)
dim v as new CIVectorMBS(p)

dim x as CGRectMBS = v.CGRectValue
MsgBox str(x.Origin.X)+" "+str(x.Origin.y)+" "+str(x.Size.Width)+" "+str(x.Size.Height)

Notes: The CGRect structure's X, Y, height and width values are stored in the vector's X, Y, Z and W properties.
Available in OS X v10.9 and later.
See also:

4.253.9   Constructor(StringRepresentation as String)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new vector based on content of the string.
Example:

dim v as CIVectorMBS
v=New CIVectorMBS(" [1 2 3] ")

See also:

4.253.10   Constructor(t as CGAffineTransformMBS)

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: Initializes a vector that is initialized with values provided by a CGAffineTransform.
Example:

dim p as new CGAffineTransformMBS
dim v as new CIVectorMBS(p)
dim x as CGAffineTransformMBS = v.CGAffineTransformValue
MsgBox str(x.A)+" "+str(x.B)+" "+str(x.C)+" "+str(x.D)+" "+str(x.TX)+" "+str(x.TY)

Notes: The six values that comprise the affine transform fill the first six positions of the resulting CIVector object.
Available in OS X v10.9 and later.
See also:

4.253.11 Constructor(values() as Double)

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Initializes a new vector with given values.
See also:

4.253.12 Constructor(values() as single)

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Initializes a new vector with given values.
See also:

4.253.13 Constructor(x as Double)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new vector based on one value.
Example:

dim x as Double
dim v as CIVectorMBS
v=New CIVectorMBS(x)

See also:

4.253.14 Constructor(x as Double, y as Double)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new vector based on two values.
Example:

dim x,y as Double
dim v as CIVectorMBS
v=New CIVectorMBS(x,y)

See also:

4.253.15   Constructor(x as Double, y as Double, z as Double)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new vector based on three values.
Example:

dim x,y,z as Double
dim v as CIVectorMBS
v=New CIVectorMBS(x,y,z)

See also:

4.253.16   Constructor(x as Double, y as Double, z as Double, w as Double)

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new vector based on 4 values.
Example:

dim x,y,z,w as Double
dim v as CIVectorMBS
v=New CIVectorMBS(x,y,z,w)

See also:

4.253.17   copy as CIVectorMBS

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Creates a copy of the vector object.

4.253.18   Value(index as Integer) as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The value with the given index.
Notes: Index is zero based.

4.253.19 vectorWithCGAffineTransform(t as CGAffineTransformMBS) as CIVectorMBS

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: Creates and returns a vector that is initialized with values provided by a CGAffineTransform.
Example:

dim p as new CGAffineTransformMBS
dim v as CIVectorMBS = CIVectorMBS.vectorWithCGAffineTransform(p)
dim x as CGAffineTransformMBS = v.CGAffineTransformValue
MsgBox str(x.A)+" "+str(x.B)+" "+str(x.C)+" "+str(x.D)+" "+str(x.TX)+" "+str(x.TY)

Notes: t: A transform.
Returns a vector initialized with the specified values.

The six values that comprise the affine transform fill the first six positions of the resulting CIVector object.

4.253.20 vectorWithCGPoint(p as CGPointMBS) as CIVectorMBS

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: Creates and returns a vector that is initialized with values provided by a CGPoint.
Example:

dim p as new CGPointMBS(10, 20)
dim v as CIVectorMBS = CIVectorMBS.vectorWithCGPoint(p)

MsgBox str(v.x)+" "+str(v.y)

Notes: p: A point.
A vector initialized with the specified values.

The CGPoint's X and Y values are stored in the vector's X and Y properties.

4.253.21 vectorWithCGRect(r as CGRectMBS) as CIVectorMBS

Plugin Version: 14.1, Platform: macOS, Targets: All.

Function: Creates and returns a vector that is initialized with values provided by a CGRect.
Example:

dim p as new CGRectMBS(10, 20, 30, 40)
dim v as CIVectorMBS = CIVectorMBS.vectorWithCGRect(p)

dim x as CGRectMBS = v.CGRectValue
MsgBox str(x.Origin.X)+" "+str(x.Origin.y)+" "+str(x.Size.Width)+" "+str(x.Size.Height)

Notes: r: A rect.

Returns a vector initialized with the specified values.
The CGRect's X, Y, height and width values are stored in the vector's X, Y, Z and W properties.

4.253.22   vectorWithString(s as string) as CIVectorMBS

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Creates a new vector based on content of the string.

4.253.23   vectorWithValues(values() as Double) as CIVectorMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Creates a new vector based on the given values.
See also:

- 4.253.24 vectorWithValues(values() as single) as CIVectorMBS   1456

4.253.24   vectorWithValues(values() as single) as CIVectorMBS

Plugin Version: 16.0, Platform: macOS, Targets: All.

Function: Creates a new vector based on the given values.
See also:

- 4.253.23 vectorWithValues(values() as Double) as CIVectorMBS   1456

4.253.25   vectorWithX(x as Double) as CIVectorMBS

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Creates a new vector based on one value.

4.253.26 vectorWithXY(x as Double, y as Double) as CIVectorMBS

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Creates a new vector based on two values.

4.253.27 vectorWithXYZ(x as Double, y as Double, z as Double) as CIVectorMBS

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Creates a new vector based on three values.

4.253.28 vectorWithXYZW(x as Double, y as Double, z as Double, w as Double) as CIVectorMBS

Plugin Version: 12.4, Platform: macOS, Targets: All.

Function: Creates a new vector based on 4 values.

4.253.29 Properties

4.253.30 Count as Integer

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Return the number of values stored in the vector.
Notes: (Read only property)

4.253.31 Description as String

Plugin Version: 9.7, Platform: macOS, Targets: All.

Function: Returns the textual description for this vector.
Notes: (Read only property)

4.253.32 Handle as Integer

Plugin Version: 12.1, Platform: macOS, Targets: All.

Function: The handle to the CIVector reference used.
Notes: (Read only property)

4.253.33   StringRepresentation as String

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Returns the vector as a string
Example:

dim v as CIVectorMBS

v=NewCIVectorWithXYZMBS(1,2,3)

MsgBox v.StringRepresentation // shows " [1 2 3] "

Notes: Value is "" on any error.
(Read only property)

4.253.34   W as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The W value.
Notes: (Read only property)

4.253.35   X as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The X value.
Notes: (Read only property)

4.253.36   Y as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The Y value.
Notes: (Read only property)

4.253.37   Z as Double

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: The Z value.
Notes: (Read only property)

4.254 Globals

4.254.1 NewCIColorMBS(red as single, green as single, blue as single, alpha as single=1.0) as CIColorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new color based on the given values.
Notes: Returns nil on any error.
Requires Mac OS X 10.4 to work.

4.254.2 NewCIColorWithCGColorMBS(CGColor as Variant) as CIColorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new CIColor based on the given CoreGraphics color.
Notes: CGColor parameter must be a CGColorMBS object.
Returns nil on any error.
Requires Mac OS X 10.4 to work.

4.254.3 NewCIColorWithStringMBS(s as String) as CIColorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new CIColor based on the given string.
Example:

dim c as CIColorMBS

c=NewCIColorWithStringMBS("1 0.5 0 1")

MsgBox c.stringRepresentation // shows "1 0.5 0 1"

Notes: Returns nil on any error.
Requires Mac OS X 10.4 to work.

4.254.4 NewCIContextMBS(cgcontext as CGContextMBS) as CIContextMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Create a new CoreImage context object without options, all output will be drawn into the CG

context.
Notes: Returns nil on any error.
Requires Mac OS X 10.4 to work.
See also:

- 4.254.5 NewCIContextMBS(cgcontext as CGContextMBS, OutputColorSpace as CGColorSpaceMBS, WorkingColorSpace as CGColorSpaceMBS, UseSoftwareRenderer as Boolean) as CIContextMBS 1461

4.254.5 NewCIContextMBS(cgcontext as CGContextMBS, OutputColorSpace as CGColorSpaceMBS, WorkingColorSpace as CGColorSpaceMBS, UseSoftwareRenderer as Boolean) as CIContextMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Create a new CoreImage context object with options, all output will be drawn into the CG context.
Notes: OutputColorSpace: A CGColorSpaceMBS object defining the color space in which all intermediate operations are performed.
WorkingColorSpace: A CGColorSpaceRef object defining the color space that images are converted to before rendering into the context.
UseSoftwareRenderer: Whether you want software renderer only.

Returns nil on any error.
Requires Mac OS X 10.4 to work.
See also:

- 4.254.4 NewCIContextMBS(cgcontext as CGContextMBS) as CIContextMBS   1460

4.254.6 NewCIImagewithBitmapDataMBS(data as memoryblock, BytesPerRow as Integer, Width as Integer, Height as Integer, Format as Integer, colorspace as CGColorSpaceMBS) as CIImageMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage from a RAW memory buffer.
Notes: Format must be one of this constants: kCIFormatRGBAf, kCIFormatRGBA16 and kCIFormatARGB8.

Returns nil on any error.
Requires Mac OS X 10.4 to work.

4.254.7 NewCIImagewithBitmapMemoryMBS(data as memoryblock, DataLength as Integer, BytesPerRow as Integer, Width as Integer, Height as Integer, Format as Integer, colorspace as CGColorSpaceMBS) as CIImageMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage from a RAW memory buffer.
Notes: Data points directly to the row data.
Length is the size of the memoryblock in bytes.
BytesPerRow is the size of a row in bytes.
Width and height are the dimensions of the image.
Format must be one of this constants: kCIFormatRGBAf, kCIFormatRGBA16 and kCIFormatARGB8.
Colorspace is the CoreGraphics Colorspace object to be used.

Returns nil on any error.
Requires Mac OS X 10.4 to work.

4.254.8 NewCIImagewithCGImageMBS(cgimage as CGImageMBS, cgcolorspace as CGColorSpaceMBS) as CIImageMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage based on a CGImage.
Notes: cgcolorspace: Use this colorspace when opening the image.
Returns nil on any error.
Requires Mac OS X 10.4 to work.
See also:

- 4.254.9 NewCIImagewithCGImageMBS(cgimage as CGImageMBS, options as dictionary = nil) as CIImageMBS   1462

4.254.9 NewCIImagewithCGImageMBS(cgimage as CGImageMBS, options as dictionary = nil) as CIImageMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage based on a CGImage.
Notes: Returns nil on any error.
Requires Mac OS X 10.4 to work.
See also:

- 4.254.8 NewCIImagewithCGImageMBS(cgimage as CGImageMBS, cgcolorspace as CGColorSpaceMBS) as CIImageMBS   1462

4.254.10 NewCIImagewithDataMBS(Data as memoryblock, cgcolorspace as CG-ColorSpaceMBS) as CIImageMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage based on the image file content stored inside the data string.
Notes: cgcolorspace: Use this colorspace when opening the image.

Returns nil on any error.
Requires Mac OS X 10.4 to work.
See also:

4.254.11 NewCIImagewithDataMBS(Data as Memoryblock, Options as Dictionary = nil) as CIImageMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage based on the image file content stored inside the data string.
Notes: Returns nil on any error.
Requires Mac OS X 10.4 to work.
See also:

4.254.12 NewCIImagewithFileMBS(file as folderitem) as CIImageMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage based on a the content of the file.
Notes: Returns nil on any error.
Requires Mac OS X 10.4 to work.

In plugin version 7.5 and Mac OS X 10.4.10 this method leaks the data because of a bug in the framework.
See also:

4.254.13   NewCIImagewithFileMBS(file as folderitem, cgcolorspace as CGColorSpaceMBS) as CIImageMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage based on a the content of the file.
Notes: cgcolorspace: Use this colorspace when opening the image.

Returns nil on any error.
Requires Mac OS X 10.4 to work.

In plugin version 7.5 and Mac OS X 10.4.10 this method leaks the data because of a bug in the framework.
See also:

4.254.14   NewCIImagewithURLMBS(url as String) as CIImageMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage based on a the content of the file where the URL points to.
Notes: Returns nil on any error.
Requires Mac OS X 10.4 to work.
See also:

4.254.15   NewCIImagewithURLMBS(url as String, cgcolorspace as CGColorSpaceMBS) as CIImageMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a CIImage based on a the content of the file where the URL points to.
Notes: cgcolorspace: Use this colorspace when opening the image.

Returns nil on any error.
Requires Mac OS X 10.4 to work.
See also:

4.254.16 NewCISamplerMBS(ciImage as CIImageMBS) as CISamplerMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new sampler based on the given image.
Notes: Returns nil on any error.
Requires Mac OS X 10.4 to work.
See also:

- 4.254.17 NewCISamplerMBS(ciImage as CIImageMBS, matrix as NSAffineTransformMBS, WrapMode as String, FilterMode as string) as CISamplerMBS   1465

4.254.17 NewCISamplerMBS(ciImage as CIImageMBS, matrix as NSAffine-TransformMBS, WrapMode as String, FilterMode as string) as CISamplerMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new sampler based on the given image.
Notes:

matrix:	An affine transformation [a b c d tx ty] defining the transformation to be applied to the sampler.
wrapmode:	A string defining how pixels outside the sampler's extent are produced. Options include kCISamplerWrapBlack (pixels are transparent black, the default) and kCISamplerWrapClamp (coordinates are clamped to the extent).
FilterMode:	A string defining the filter to use when sampling the image. One of kCISamplerFilterNearest (point sampling) or kCISamplerFilterLinear (bilinear interpolation, the default).

Returns nil on any error.
Requires Mac OS X 10.4 to work.
See also:

- 4.254.16 NewCISamplerMBS(ciImage as CIImageMBS) as CISamplerMBS   1465

4.254.18 NewCIVectorWithStringMBS(s as string) as CIVectorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new vector based on content of the string.
Example:

dim v as CIVectorMBS
v=NewCIVectorWithStringMBS(" [1 2 3] ")

Notes: Returns nil on any error.
Requires Mac OS X 10.4 to work.

4.254.19   NewCIVectorWithXMBS(x as Double) as CIVectorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new vector based on one value.
Example:

dim x as Double = 1
dim v as CIVectorMBS
v=NewCIVectorWithXMBS(x)

Notes: Returns nil on any error.
Requires Mac OS X 10.4 to work.
Blog Entries

- MBS Xojo / Real Studio Plugins, version 16.2pr1

4.254.20   NewCIVectorWithXYMBS(x as Double, y as Double) as CIVectorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new vector based on two values.
Example:

dim x as Double = 1
dim y as Double = 2
dim v as CIVectorMBS
v=NewCIVectorWithXYMBS(x,y)

Notes: Returns nil on any error.
Requires Mac OS X 10.4 to work.

4.254.21   NewCIVectorWithXYZMBS(x as Double, y as Double, z as Double) as CIVectorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new vector based on three values.
Example:

dim x as Double = 1
dim y as Double = 2
dim z as Double = 3
dim v as CIVectorMBS
v=NewCIVectorWithXYZMBS(x,y,z)

Notes: Returns nil on any error.
Requires Mac OS X 10.4 to work.

4.254.22 NewCIVectorWithXYZWMBS(x as Double, y as Double, z as Double, w as Double) as CIVectorMBS

Plugin Version: 7.3, Platform: macOS, Targets: All.

Function: Creates a new vector based on 4 values.
Example:

dim x as Double = 1
dim y as Double = 2
dim z as Double = 3
dim w as Double = 4
dim v as CIVectorMBS
v=NewCIVectorWithXYZWMBS(x,y,z,w)

Notes: Returns nil on any error.
Requires Mac OS X 10.4 to work.

Chapter 5

List of Questions in the FAQ

Chapter 6

The FAQ

6.0.1 Can anyone help me convert seconds to time in this format hh:mm:ss?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Sure, here's a routine I use (which has an advantage over the previously-posted Date-based solution in that you don't have to rely on the creation of an object – all that happens is some division and string concatenation):
Example:

```
Function SecsToTimeString(timeInSecs as Integer, padHours as boolean, padMinutes as boolean) as string
// Given an amount time (in seconds), generates a string representing that amount
// of time. The padHours and padMinutes parameters determine whether to display
// hours and minutes if their values are zero.

// Examples:
// timeInSecs = 90, padHours = true; returns "00:01:30"
// timeInSecs = 1, padHours = false, padMinutes = true; returns "00:01"
// timeInSecs = 3601, padMinutes = false; returns "01:00:01"

dim hours, minutes, seconds as Integer
dim hoursString, minutesString as string

hours = timeInSecs / 3600
minutes = (timeInSecs mod 3600) / 60
seconds = timeInSecs mod 60

if hours = 0 then
if padHours then
hoursString = "00:"
else
hoursString = ""
end if
```

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else
hoursString = Format(hours, "##\:")
end if
if minutes = 0 then
if hours <>0 or padMinutes then
minutesString = "00:"
else
minutesString = ""
end if
else
minutesString = Format(minutes, "00\:")
end if

return hoursString + minutesString + Format(seconds, "00")
End Function

Notes: (from the rb mailinglist)

6.0.2   Do you have plugins for Android?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Since there is no plugin SDK for Android, we have no way to make a plugin for Android.
Notes: We support macOS, Windows, Linux and iOS.

6.0.3   How do I get the proper highlight color on Mac OS X for active/inactive selection?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use functions from NSColor to get proper highlight color in RGB:
Example:

Function ProperHighlightColor(active as Boolean) As Color
#if TargetCocoa
Dim theColor As NSColorMBS
If active Then
theColor = NSColorMBS.alternateSelectedControlColor
Else
theColor = NSColorMBS.secondarySelectedControlColor
End If

Dim rgbColor As NSColorMBS = theColor.colorUsingColorSpaceName(NSColorSpaceMBS.NSCalibrate-

dRGBColorSpace)
If rgbColor <>Nil Then
Dim red as Integer = rgbColor.redComponent * 255.0
Dim green as Integer = rgbColor.greenComponent * 255.0
Dim blue as Integer = rgbColor.blueComponent * 255.0
Return RGB(red, green, blue)
Else
Return HighlightColor
End If
#else
return HighlightColor
#endif
End Function

Notes: As you see we convert color to Calibrated RGB for best results.
See also:

6.0.4 How to catch delete key?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: The following is the code in keydown event catches delete or backspace keys.
Example:

Function KeyDown(Key As String) As Boolean
if asc(key) = 8 or asc(key) = 127 then
MsgBox "Delete"
Return true
end if
End Function

See also:

6.0.5   How to convert cmyk to rgb?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

The following is the code to convert cmyk values to an RGB color datatype.
It's just a basic estimate of the color values. If you are looking for completely color accurate solution, this is not it. It should work for most people. :)
Example:

```
Function CMYKToRGB(c as Integer, m as Integer, y as Integer, k as Integer) As color
// converts c,m,y,k values (0-100) to color data type RGB
// place this in a method. Supply C,M,Y,K values-
// it returns color datatype


dim color_RGB as color
dim r, g, b as Integer

r=255-round(2.55*(c+k))
if r<0 then
r=0
end if
g=255-round(2.55*(m+k))
if g<0 then
g=0
end if
b=255-round(2.55*(y+k))
if b<0 then
b=0
end if

color_RGB=RGB(r,g,b)

return color_RGB

End Function
```

Notes:

(from the rb mailinglist)
See also:

6.0.6 How to delete a folder?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: The following is the code deletes a folder recursively.
Example:

```
Sub deletefolder(f as folderitem)
dim files(-1) as FolderItem

if f=nil then Return

// delete single file
if f.Directory=false then
f.Delete
Return
end if

// get a list of all items in that folder
dim i,c as Integer
c=F.Count
for i=1 to c
files.Append f.TrueItem(i)
next

// delete each item
for each fo as FolderItem in files
if fo=nil then
' ignore
elseif fo.Directory then
deletefolder fo
fo.delete
else ' file
```

fo.Delete
end if
next

f.Delete
End Sub

See also:

6.0.7 How to detect if CPU if 64bit processor?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Via CPUID you can ask CPU:
Example:

dim c as new CPUIDMBS

if c.Flags(CPUIDMBS.kFeatureLM) then
MsgBox "64-bit CPU"
else
MsgBox "32-bit CPU"
end if

Notes: Should work on all intel compatible CPUs.
See also:

6.0.8 How to query variant type string for a variant?

Plugin Version: 20.5, Platforms: macOS, Linux, Windows.

Answer: The following example function returns type string for variant.
Example:

```
Public Function VariantTypeString(v as Variant) as string
// Xojo's VarType doesn't know Unsigned integers
'Dim type As Integer = VarType(v)

// MBS VarType can detect unsigned integer
Dim type As Integer = GetVariantTypeMBS(v)

Dim IsArray As Boolean = BitwiseAnd(type, Variant.TypeArray) = Variant.TypeArray

// type without array
type = BitwiseAnd(type, Bitwise.OnesComplement(Variant.TypeArray))

// build a dictionary to map types on first call
Static TypeMap As Dictionary
If TypeMap = Nil Then
TypeMap = New Dictionary
TypeMap.Value(Variant.TypeBoolean) = "Boolean"
TypeMap.Value(Variant.TypeCFStringRef) = "CFStringRef"
TypeMap.Value(Variant.TypeColor) = "Color"
TypeMap.Value(Variant.TypeCString) = "CString"
TypeMap.Value(Variant.TypeCurrency) = "Currency"
TypeMap.Value(Variant.TypeDate) = "Date"
TypeMap.Value(Variant.TypeDateTime) = "DateTime"
TypeMap.Value(Variant.TypeDouble) = "Double"
TypeMap.Value(Variant.TypeInt32) = "Int32"
TypeMap.Value(Variant.TypeInt64) = "Int64"
TypeMap.Value(Variant.TypeInteger) = "Integer"
TypeMap.Value(Variant.TypeNil) = "Nil"
TypeMap.Value(Variant.TypeObject) = "Object"
TypeMap.Value(Variant.TypeOSType) = "OSType"
TypeMap.Value(Variant.TypePString) = "PString"
TypeMap.Value(Variant.TypePtr) = "Ptr"
TypeMap.Value(Variant.TypeSingle) = "Single"
TypeMap.Value(Variant.TypeString) = "String"
TypeMap.Value(Variant.TypeStructure) = "Structure"
TypeMap.Value(Variant.TypeText) = "Text"
TypeMap.Value(Variant.TypeWindowPtr) = "WindowPtr"
TypeMap.Value(Variant.TypeWString) = "WString"

// MBS extra types
TypeMap.Value(Variant.TypeInt32+100) = "UInt32"
TypeMap.Value(Variant.TypeInt64+100) = "UInt64"
```

End If

// lookup type

#if DebugBuild then
If Not TypeMap.HasKey(type) Then
Break // missing type
End If
#endif

If IsArray Then
Return "Array of " + TypeMap.Lookup(type,"?")
Else
Return TypeMap.Lookup(type,"?")
End If
End Function

See also:

6.0.9   How to refresh a htmlviewer on Windows?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can ask the browser to reload the website with this code line:
Example:

call htmlViewer1.IERunJavaScriptMBS("javascript:document.location.reload()")

See also:

6.0.10 Is there an example for vector graphics in Xojo?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Try this example inside the paint event of a window:
Example:

```
dim v as Group2D
dim r as RectShape
dim s as StringShape

const pi=3.14

s=new StringShape
s.Text="Hello World!"
s.TextFont="Geneva"
s.TextSize=24
s.FillColor=rgb(0,0,255)
s.Italic=true
s.y=5
s.x=0

r=new RectShape

r.X=0
r.y=0
r.Height=100
r.Width=180
r.BorderColor=rgb(255,0,0)
r.FillColor=rgb(0,255,0)
r.BorderWidth=5
r.Border=50

v=new Group2d
v.Append r
v.Append s
v.Rotation=pi*-20.0/180.0
v.x=150
v.y=150

g.DrawObject v
```

6.0.11   Picture functions do not preserve resolution values?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Yes, the picture functions return pictures with no/default resolution values.
Example:

dim l as Picture = LogoMBS(500)

l.HorizontalResolution = 300
l.VerticalResolution = 300

dim r as Picture = l.Rotate90MBS

MsgBox str(r.HorizontalResolution)+" x "+str(r.VerticalResolution)

r.HorizontalResolution = l.HorizontalResolution
r.VerticalResolution = l.VerticalResolution

MsgBox str(r.HorizontalResolution)+" x "+str(r.VerticalResolution)

Notes: So please fix them yourself after calling a function.

Maybe in the future this changes, but currently you can't really set this easily from plugin code.

6.0.12   A toolbox call needs a rect - how do I give it one?

Plugin Version: all, Platforms: macOS, Windows.

Answer: Fill a memoryblock like this:
Example:

Dim MB As Memoryblock
MB = NewMemoryBlock(8)
MB.Short(0) = window1.Top
MB.Short(2) = window1.Left
MB.Short(4) = window1.Height+window1.Top // bottom
MB.Short(6) = window1.Width+window1.Left // right

6.0.13   API client not supported?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: If you get this exception message on SQLConnectionMBS.Connect, we may have a problem.
Notes: First case is that the given thing is not supported (e.g. MS SQL directly on Mac).
Second case is that the plugin compilation went wrong and the support for the database was not linked into the plugin. Like MySQL missing or MS SQL on Windows missing. In that case please contact us to fix the plugin.

6.0.14   Can I access Access Database with Java classes?

Plugin Version: all, Platform: Windows.

Answer: You can use ucanaccess to access databases created with Microsoft
Example:

dim options(-1) as string

// load all the jar files we have in a folder called java:

dim appFolder as FolderItem = GetFolderItem("")

Dim count as Integer = appFolder.Parent.Child("java").Count
dim libjs() as string
For i as Integer = 1 to count
Dim f As FolderItem = appFolder.Parent.Child("java").item(i)
If f <>Nil and f.Exists Then
libjs.append f.NativePath+";"
End If
Next

// now init virtual machine
dim librery as string = Join(libjs, "")
dim vm as new JavaVMMBS(librery)

if vm.Handle = 0 then
MsgBox "Failed to initialize virtual machine"
else
// now make a new database connection with ucanaccess
dim d as new JavaDatabaseMBS(vm,"net.ucanaccess.jdbc.UcanaccessDriver")
Dim DbFile as FolderItem = appFolder.Parent.Child("Database11.accdb")
dim j as JavaConnectionMBS = d.getConnection("jdbc:ucanaccess://"+DbFile.NativePath)

// select and show values
dim r as JavaResultSetMBS = j.MySelectSQL("Select * From test")
while r.NextRecord
MsgBox r.getString("FirstName") +" "+ r.getString("LastName")
wend

end if

Exception e as JavaExceptionMBS
MsgBox e.message+" errorcode: "+str(e.ErrorNumber)

Notes: see website:
http://ucanaccess.sourceforge.net/site.html

6.0.15   Can I create PDF from Xojo Report using DynaPDF?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Yes, we have a graphics class integration for DynaPDF.
Notes: Since MBS Plugin in version 19.2, we can integrate reports with Xojo.

6.0.16   Can I use AppleScripts in a web application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Yes, but they run on the server, not on the client.
Example:

dim a as new AppleScriptMBS

// query my application name
a.Compile "tell application ""System Events"" to return name of current application"

// run
a.Execute

// show result
label1.text = a.Result

// shows something like "My Application.fcgi.debug"

Notes: This can be useful to control the server from remote, if and only if the your sever is running Mac
OS X.

6.0.17   Can I use graphics class with DynaPDF?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Sorry, no. We can't provide a graphics subclass from plugin.
Notes: The is a feature request to allow graphics subclasses:
Feedback case 11391: feedback://showreport?report_id=11391

6.0.18   Can I use sockets on a web application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Yes, but they run on the server, not on the client.
Notes: You can use HTTPSocket, SMTPSocket, POP3Socket, SMTPSecureSocket, SecurePOP3Socket, EasyTCPSocket, EasyUDPSocket, AutoDiscovery, our Bonjour classes or our CURL* classes. But all of them work on the server, not on the client.

This means if you search for a printer with Bonjour, you can find the printers in the local network on your server hosting site. Using SMTPSocket may be a good idea for sending emails from the server like notifications.

6.0.19   Can I use your ChartDirector plugin on a web application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Yes, our ChartDirector plugin works just fine on the Xojo Web Edition.
Example:

```
// The data for the pie chart
dim data(-1) as Double=array(55.0, 18.0, 25.0, 22.0, 18.0, 30.0, 35.0)

// The labels for the pie chart, Words are choosen random to check font!
dim labels(-1) as string=array("Germany","Italy","France","Spain","UK","Poland","Russia")

// The colors to use for the sectors
dim colors(-1) as Integer

colors.Append &h66aaee
colors.Append &heebb22
colors.Append &hbbbbbb
colors.Append &h8844ff

if TargetLinux then
CDBaseChartMBS.SetFontSearchPath "/usr/share/fonts/truetype/msttcorefonts"
end if

// Create a PieChart object of size 360 x 300 pixels
dim c as new CDPieChartMBS(700, 600)
```

c.setBackground(c.linearGradientColor(0, 0, 0, c.getHeight(), &h0000cc, &h000044))
c.setRoundedFrame(&hffffff, 16)
dim tt as CDTextBoxMBS = c.addTitle("ChartDirector Demonstration", "timesbi.ttf", 18)
tt.setMargin(0, 0, 16, 0)
tt.setFontColor(&hFFFFFF)

// Set the center of the pie at (180, 140) and the radius to 100 pixels
c.setPieSize 350,300,150
// Set the sector colors
c.setColors(c.kDataColor, colors)

// Draw the pie in 3D with a pie thickness of 20 pixels
c.set3D(20)

dim t as CDTextBoxMBS = c.setLabelStyle("arialbd.ttf", 10, &h000000)
t.setBackground(CDPieChartMBS.kSameAsMainColor, CDPieChartMBS.kTransparent, CDPieChartMBS.soft-
Lighting(CDPieChartMBS.kRight, 0))
t.setRoundedCorners(8)

// Use local gradient shading for the sectors, with 5 pixels wide
// semi-transparent white (bbffffff) borders
c.setSectorStyle(CDPieChartMBS.kLocalGradientShading, &hbbffffff, 0)

// Set the pie data and the pie labels
c.setData data,labels
call c.setLabelStyle "arialbd.ttf",18

dim pic as picture = c.makeChartPicture
dim wp as new WebPicture(pic, Picture.FormatJPEG) // JPEG makes it smaller and faster

ImageView1.Picture=wp

Notes: Be aware that our plugin produces pictures for you, which you assign to ImageViews. Tranferring
those pictures takes time, so you can optimize that with using WebPicture class. There you can decide
between different compressions to improve speed (use JPEG instead of PNG).

e.g. if you use ubuntu, you can install the ttf-mscorefonts-installer package and call this method with
"/usr/share/fonts/truetype/msttcorefonts" as the path. No backslash on the end of a path, please.

6.0.20   Can I use your DynaPDF plugin on a web application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Yes, our DynaPDF plugin works just fine on the Xojo Web Edition.
Notes: PDF files are created on the server. You may want to offer a preview to the user which uses reduced resolution images to reduce the time to download the PDF.

See our Create PDF example for the Xojo Web Edition.

6.0.21   Can I use your plugin controls on a web application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: No.

6.0.22   Can you get an unique machine ID?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: There is nothing like an unique machine ID.
Notes: 1:
You can use the MAC IDs of the network interfaces.
This can be changed by the user with software tools.
And the list of network interfaces changes if user reorder the interfaces.

2:
You can use the system folder creation date/time.
This may stay equal after cloning machines or after migration to
new PC.

3:
You can use the Mac Serialnumber.
Mac only and it can happen that a Mac does not have a serial
number.

4:
You can use the x86 CPU ID.
This is x86 CPU only and does not avoid running on the same CPU in
different PCs.

6.0.23   ChartDirector: Alignment Specification

Plugin Version: 8.2, Platforms: macOS, Linux, Windows.

Answer: ChartDirector: Alignment Specification
Notes: In many ChartDirector objects, you may specify the alignment of the object's content relative to its boundary. For example, for a TextBox object, you may specify the text's alignment relative to the box boundary by using TextBox.setAlignment.

The ChartDirector API defines several constants for the alignment options.

ConstantValueDescription

BottomLeft	1	The leftmost point on the bottom line.
BottomCenter	2	The center point on the bottom line.
BottomRight	3	The rightmost point on the bottom line.
Left	4	The leftmost point on the middle horizontal line.
Center	5	The center point on the middle horizontal line.
Right	6	The rightmost point on the middle horizontal line.
TopLeft	7	The leftmost point on the top line.
TopCenter	8	The center point on the top line.
TopRight	9	The rightmost point on the top line.
Bottom	2	The center point on the bottom line. Same as BottomCenter.
Top	8	The center point on the top line. Same as TopCenter.
TopLeft2	10	An alternative top-left position used in Axis.setTitlePos for axis title positioning only. For a vertical axis, TopLeft2 refers to refers to the left of the top side, while TopLeft refers to the top of the left side. The reverse applies for a horizontal axis.
TopRight2	11	An alternative top-right position used in Axis.setTitlePos for axis title positioning only. For a vertical axis, TopRight2 refers to refers to the right of the top side, while TopRight refers to the top of the right side. The reverse applies for a horizontal axis.
BottomLeft2	12	An alternative bottom-left position used in Axis.setTitlePos for axis title positioning only. For a vertical axis, BottomLeft2 refers to refers to the left of the bottom side, while BottomLeft refers to the bottom of the left side. The reverse applies for a horizontal axis.
BottomRight2	13	An alternative bottom-right position used in Axis.setTitlePos for axis title positioning only. For a vertical axis, BottomRight2 refers to refers to the right of the bottom side, while BottomRight refers to the bottom of the right side. The reverse applies for a horizontal axis.

6.0.24   ChartDirector: Color Specification

Plugin Version: 8.2, Platforms: macOS, Linux, Windows.

Answer: ChartDirector: Color Specification
Notes: Many functions in the ChartDirector API accept colors as parameters. ChartDirector supports col-

ors specified in web and HTML compatible ARGB format, in which ARGB refers to the Alpha transparency, Red, Green and Blue components of the color.

In addition to ARGB colors, ChartDirector supports "dynamic" colors. A dynamic color is a color that changes depending on the position of the pixels. The "dynamic" colors that ChartDirector supports include "pattern colors", "metal colors", "gradient colors", "zone colors" and "dash line colors".

ChartDirector supports specifying colors indirectly using "palette colors". When a "palette color" is used, the color is specified as an index to a palette. The actual color is looked up from the palette.ARGB Color ARGB color consists of 4 components - alpha transparency, red, green and blue. The four components are encoded as a 32-bit number, with each component occupying 8 bits. In hexadecimal notation, it is AAR-RGGBB, where AA, RR, GG and BB are the alpha transparency, red, green and blue components.

Each component ranges from 00 - FF (0 - 255), representing its intensity. For example, pure red color is 00FF0000, pure green color is 0000FF00, and pure blue color is 000000FF. White color is 00FFFFFF, and black color is 00000000.

Most programming language requires you to put special prefix in front of hexadecimal characters. For C++, the prefix is "0x". For example, the syntax for the hexadecimal number 00FFFFFF is 0x00FFFFFF, or simply 0xFFFFFF.
For the alpha transparency component, a zero value means the color is not transparent all at. This is equivalent to traditional RGB colors. A non-zero alpha transparency means the the color is partially transparent. The larger the alpha transparency, the more transparent the color will be. If a partially transparent color is used to draw something, the underlying background can still be seen.

For example, 80FF0000 is a partially transparent red color, while 00FF0000 is a non-transparent red color.

Note that ChartDirector's ARGB color is web and HTML compatible. For example, red is FF0000, the same as in HTML. There are many resources on the web that provide tables in which you can click a color and it will show its HTML color code. These color codes can be used in ChartDirector.

If alpha transparency is FF (255), the color is totally transparent. That means the color is invisible. It does not matter what the RGB components are. So in ChartDirector, only one totally transparent color is used - FF000000. All other colors of the form FFnnnnnn are reserved to represent palette colors and dynamic colors, and should not be interpreted as the normal ARGB colors.

The totally transparent color FF000000 is often used in ChartDirector to disable drawing something. For example, if you want to disable drawing the border of a rectangle, you can set the border color to totally transparent.

For convenience, ChartDirector defines a constant called Transparent, which is equivalent to FF000000.Pattern Color

A pattern color is a dynamic color that changes according to a 2D periodic pattern. When it is used to fill an area, the area will look like being tiled with a wallpaper pattern.

Pattern colors are created using BaseChart.patternColor, BaseChart.patternColor2, DrawArea.patternColor and DrawArea.patternColor2. The patternColor method creates pattern colors using an array of colors as a bitmap. The patternColor2 method creates pattern colors by loading the patterns from image files.

These methods return a 32-bit integer acting as a handle to the pattern color. The handle can be used in any ChartDirector API that expects a color as its input.Metal Color
A metal color is a color of which the brightness varies smoothly across the chart surface as to make the surface looks shiny and metallic. ChartDirector supports using any color as the base color of the metal color. In particular, using yellow and grey as the base colors will result in metal colors that look gold and silver.

Metal colors are most often used as background colors of charts. They are created using CDBaseChartMBS.metalColor, CDBaseChartMBS.goldColor and CDBaseChartMBS.silverColor. The first method allows you to specify an arbitrary base color. The second and third methods use yellow and grey as the base colors, resulting in gold and silver metal colors.

These methods return a 32-bit integer acting as a handle to the gradient color. The handle can be used in any ChartDirector API that expects a color as its input.Gradient Color
A gradient color is a color that changes progressively across a direction.

Gradient colors are created using BaseChart.gradientColor, BaseChart.gradientColor2, DrawArea.gradientColor and DrawArea.gradientColor2. The gradientColor method creates a 2-point gradient color that changes from color A to color B. The gradientColor2 method creates a multi-point gradient colors that changes from color A to B to C ....

These methods return a 32-bit integer acting as a handle to the gradient color. The handle can be used in any ChartDirector API that expects a color as its input.

One common use of multi-point gradient colors is to define colors that have metallic look and feel. Please refer to DrawArea.gradientColor2 for details.Dash Line Colors
A dash line color is a color that switches on and off periodically. When used to draw a line, the line will appear as a dash line.

Dash line colors are created using BaseChart.dashLineColor and DrawArea.dashLineColor. They accept a line color and a dash pattern code as arguments, and return a 32-bit integer acting as a handle to the dash line color. The handle can be used in any ChartDirector API that expects a color as its input.Zone Colors
A zone color is for XY charts only. It is a color that automatically changes upon reaching a data threshold value along the x-axis or y-axis. Zone colors are created using Layer.xZoneColor, Layer.yZoneColor, XYChart.xZoneColor or XYChart.yZoneColor.Palette Colors
Palette colors are colors of the format FFFFnnnn, where the least significant 16 bits (nnnn) are the index to the palette. A palette is simply an array of colors. For a palette color, the actual color is obtained by

looking up the palette using the index. For example, the color FFFF0001 is the second color in the palette (first color is index 0).

The colors in the palette can be ARGB colors or "dynamic" colors (pattern, gradient and dash line colors).

The first eight palette colors have special significance. The first three palette colors are the background color, default line color, and default text color of the chart. The 4th to 7th palette colors are reserved for future use. The 8th color is a special dynamic color that is equal to the data color of the "current data set".

The 9th color (index = 8) onwards are used for automatic data colors. For example, in a pie chart, if the sector colors are not specified, ChartDirector will automatically use the 9th color for the first sector, the 10th color for the second sector, and so on. Similarly, for a multi-line chart, if the line colors are not specified, ChartDirector will use the 9th color for the first line, the 10th color for the second line, and so on.

The ChartDirector API defines several constants to facilitate using palette colors.

ConstantValueDescription

Constant	Value	Description
Palette	FFFF0000	The starting point of the palette. The first palette color is (Palette + 0). The nth palette color is (Palette + n - 1).
BackgroundColor	FFFF0000	The background color.
LineColor	FFFF0001	The default line color.
TextColor	FFFF0002	The default text color.
[Reserved]	FFFF0003 - FFFF0006	These palette positions are reserved. Future versions of ChartDirector may use these palette positions for colors that have special significance.
SameAsMainColor	FFFF0007	A dynamic color that is equal to the data color of the current data set. This color is useful for objects that are associated with data sets. For example, in a pie chart, if the sector label background color is SameAsMainColor, its color will be the same as the corresponding sector color.
DataColor	FFFF0008	The starting point for the automatic data color allocation.

When a chart is created, it has a default palette. You may modify the palette using BaseChart.setColor, BaseChart.setColors, or BaseChart.setColors2.

The advantages of using palette colors are that you can change the color schemes of the chart in one place. ChartDirector comes with several built-in palettes represented by the following predefined constants.

ConstantDescription

6.0.25 ChartDirector: Font Specification

Plugin Version: 8.2, Platforms: macOS, Linux, Windows.

defaultPalette	An array of colors representing the default palette. This palette is designed for drawing charts on white backgrounds (or lightly colored backgrounds).
whiteOnBlackPalette	An array of colors useful for drawing charts on black backgrounds (or darkly colored backgrounds).
transparentPalette	An array of colors useful drawing charts on white backgrounds (or lightly colored backgrounds). The data colors in this palette are all semi-transparent.

Answer: ChartDirector: Font Specification

Notes: Font Name

In ChartDirector, the font name is simply the file name that contains the font. For example, under the Windows platform, the "Arial" font is "arial.ttf", while the "Arial Bold" font is "arialbd.ttf".

NOTE: Mac OS X Specific Information

In Mac OS X, in addition to ".ttf", ChartDirector also supports Mac OS X font file formats, such as Font Suitcase files and Datafork files (.dfont). These files often contain multiple fonts. For example, the "Gill-Sans.dfont" file contains 6 fonts.

So in addition to the file name, an index is needed to determine the font. The index is specified by appending a " | " character to the font name, followed by the index number. For example, the third font in "GillSans.dfont" is denoted as "GillSans.dfont | 2". (Note: The first font starts at 0.) If no index number is provided, the first font is assumed.

ChartDirector also supports using Mac OS X Font Manager names. For example, one may use "Gill Sans Light Italic" instead of using "GillSans.dfont | 1" as the font name. However, the Mac OS X Font Manager is active only if someone has logged into the Mac GUI console, so this method is only recommended for developing applications that run on the GUI console.

The sample programs that come with ChartDirector are designed to run on all operating systems, so they use generic font file names (eg. "arial.ttf") instead of Mac OS X specific names. To allow them to run on Mac OS X, ChartDirector on Mac OS X has a built-in table to map common font file names to Mac OS X font names:

"arial.ttf", "arialbd.ttf", "ariali.ttf" and "arialbi.ttf" are mapped to "Arial | 0" (Arial), "Arial | 1" (Arial Bold), "Arial | 2" (Arial Italic) and "Arial | 3" (Arial Bold Italic)

"times.ttf", "timesbd.ttf", "timesi.ttf" and "timesbi.ttf" are mapped to "Times New Roman | 0" (Times New Roman), "Times New Roman | 1" (Times New Roman Bold), "Times New Roman | 2" (Times New Roman Italic) and "Times New Roman | 3" (Times New Roman Bold Italic)

"cour.ttf", "courbd.ttf", "couri.ttf" and "courbi.ttf" are mapped to "Courier New | 0" (Courier New), "Courier New | 1" (Courier New Bold), "Courier New | 2" (Courier New Italic) and "Courier New | 3" (Courier New Bold Italic)

Font Location

ChartDirector on Windows does not come with any font files. It relies on the operating system's font files in the " [windows] \Fonts" directory. To see what fonts are installed in your operating system and their file names, use the File Explorer to view that directory.

ChartDirector on Windows will also search for the font files in the "fonts" subdirectory (if it exists) under the directory where the ChartDirector DLL "chartdir.dll" is installed. This is useful for private fonts. Also, for some especially secure web servers, the web anonymous user may not have access to the " [windows] \Fonts" directory. In this case, you may copy the font files to the above subdirectory.

ChartDirector on Mac OS X relies on operating system font files in "/Library/Fonts" and "/System/Library/Fonts".

ChartDirector on Linux, FreeBSD and Solaris assume the fonts files are in the "fonts" subdirectory under the directory where the ChartDirector shared object "libchartdir.so" is installed. ChartDirector on Linux, FreeBSD and Solaris come with a number of font files in the "fonts" subdirectory.

To keep the download size small, ChartDirector on Linux, FreeBSD and Solaris only come with some commonly used fonts. You may download additional fonts from the Internet. In particular, the Microsoft fonts at

http://sourceforge.net/project/showfiles.php?group_id=34153&release_id=105355

is highly recommended. Please refer to

http://www.microsoft.com/typography/faq/faq8.htm

on how you could use the fonts legally in your system.

ChartDirector supports True Type fonts (.ttf), Type 1 fonts (.pfa and .pfb) and Windows bitmap fonts (.fon). On Mac OS X, ChartDirector also supports Font Suitcase and Datafork (.dfont) files. On Linux, FreeBSD and Solaris, ChartDirector also supports Portable Compiled Fonts (.pcf fonts).

If you want ChartDirector to search other directories for the font files, you may list the directories in an environment variable called "FONTPATH".

If you specify an absolute path name for the font file, ChartDirector will use the absolute path name and will not search other directories.Artificial Boldening and Italicizing

Whereas most popular font comes with different styles for "normal", "bold", "italic" and "bold italic", some fonts only come with one style (the normal style). For example, the Monotype Corsiva font that comes with MS Office only has the normal style (mtcorsva.ttf). For these cases, you may append the "Bold" and/or "Italic" words after the font file name (separated with a space) to ask ChartDirector to artificially bolden and/or italicize the font. For example, you may specify the font name as "mtcorsva.ttf Bold".Font List

Instead of specifying a single font file as the font name, you may specify a list of font files as the font name, separated by semi-colons. This is useful when using international characters that are only available in some fonts.

For example, if you would like to use the Arial font ("arial.ttf") for western characters, and the MingLiu font "mingliu.ttc" for Chinese characters (since the Arial font does not have Chinese characters), you may specify the font name as "arial.ttf;mingliu.ttc". In this case, ChartDirector will try the Arial font first. If it cannot find a certain character there, it will try the MingLiu font.Indirect Font Names

ChartDirector supports several special keywords for specifying the font name indirectly. When these keywords are used as font names, ChartDirector will look up the actual font names from a font table. The keywords are as follows:

KeywordsDescription

"normal"	This default normal font, which is the first font in the font table. This is initially mapped to "arial.ttf" (Arial).
"bold"	The default bold font, which is the second font in the font table. This is initially mapped to "arialbd.ttf" (Arial Bold).
"italic"	The default italic font, which is the third font in the font table. This is initially mapped to "ariali.ttf" (Arial Italic).
"boldItalic"	The default bold-italic font, which is the fourth font in the font table. This is initially mapped to "arialbi.ttf" (Arial Bold Italic).
"fontN"	The $(N + 1)$th font in the font table (the first font is "font0").

The font table can be modified using BaseChart.setFontTable or DrawArea.setFontTable.

The advantage of using indirect font names is that you can change the fonts fonts in your charts in one place.Font Index

Most font files contain one font. However, it is possible a font file contains multiple fonts (that is, a font collection). For example, in True Type fonts, font files with extension ".ttc" may represent a font collection.

If a font file contains multiple font, the font index can be used to specify which font to use. By default, the font index is 0, which means the first font in the font file will be used.Font Size

The font size decides how big a font will appear in the image. The font size is expressed in a font unit called points. This is the same unit used in common word processors.

Instead of specifying font size, some ChartDirector API (eg. TextBox.setFontSize) allow you to specify font height and font width separately. You may use different point sizes for font height and font width to create special effects.Font Color

This is the color to draw the font. (See Color Specification on how colors are represented in ChartDirector.)Font Angle

This is the angle in degrees by which the font should be rotated anti-clockwise.Vertical Layout

By default, text are laid out horizontally, with characters being drawn from left to right.

ChartDirector also supports vertical layout, with characters being drawn from top to bottom. For example, you may use BaseChart.addText to add text that are laid out vertically. Vertical layout is common for

oriental languages such as Chinese, Japanese and Korean.

6.0.26 ChartDirector: Mark Up Language

Plugin Version: 8.2, Platforms: macOS, Linux, Windows.

Answer: ChartDirector: Mark Up Language
Notes: ChartDirector Mark Up Language (CDML) is a language for including formatting information in text strings by marking up the text with tags.

CDML allows a single text string to be rendered using multiple fonts, with different colors, and even embed images in the text.Font Styles
You can change the style of the text by using CDML tags. For example, the line:

<*font=timesi.ttf,size=16,color=FF0000>Hello <*font=arial.ttf,size=12,color=8000*>world!
will result in the following text rendered:

In general, all tags in CDML are enclosed by <* and *>. Attributes within the tags determine the styles of the text following the tags within the same block.

If you want to include <* in text without being interpreted as CDML tags, use «* as the escape sequence.

The following table describes the supported font style attributes in CDML. See Font Specification for details on various font attributes.

AttributeDescription

Set the following text to be in superscript style. This attribute does not need to have a value. (You may use "super" as the attribute instead of "super=1".)

Note that unlike HTML tags, no double or single quotes are used in the tags. It is because CDML tags are often embedded as string literals in source code. The double or single quotes, if used, will conflict with the string literal quotes in the source code. Therefore in CDML, no quotes are necessary and they must not be used.

Also, unlike HTML tags, CDML uses the comma character as the delimiter between attributes. It is because certain attributes may contain embed spaces (such as the font file name). So space is not used as the delimiter and the comma character is used instead.

Note the font attribute above starts a new style section, while other attributes just modify the current style

font	Starts a new style section, and sets the font name. You may use this attribute without a value (that is, use "font" instead of "font=arial.ttf") to create a new style section without modifying the font name.
size	The font size.
width	The font width. This attribute is used to set the font width and height to different values. If the width and height are the same, use the size attribute.
height	The font height. This attribute is used to set the font width and height to different values. If the width and height are the same, use the size attribute.
color	The text color in hex format.
bgColor	The background color of the text in hex format.
underline	The line width of the line used to underline the following characters. Set to 0 to disable underline.
sub	Set the following text to be in subscript style. This attribute does not need to have a value. (You may use "sub" as the attribute instead of "sub=1".)
super	Set the following text to be in superscript style.

xoffset	Draw the following the text by shifting the text horizontally from the original position by the specified offset in pixels.
yoffset	Draw the following the text by shifting the text vertically from the original position by the specified offset in pixels.
advance	Move the cursor forward (to the right) by the number of pixels as specified by the value this attribute.
advanceTo	Move the cursor forward (to the right) to the position as specified by the value this attribute. The position is specified as the number of pixels to the right of the left border of the block. If the cursor has already passed through the specified position, the cursor is not moved.

section. You may use <*/font*>to terminate a style section, which will restore the font styles to the state before the style section.Blocks and Lines

In CDML, a text string may contain multiple blocks. A block may contain multiple lines of text by separating them with new line characters ("\n") or with <*br*>. The latter is useful for programming languages that cannot represent new line characters easily.

For example, the line:

<*size=15*><*block*><*color=FF*>BLOCK<*br*>ONE<*/*>and <*block*><*color=FF00*>BLOCK<*br*>TWO will result in the following text rendered:

The above example contains a line of text. The line contains two blocks with the characters " and " in between. Each block in turn contains two lines. The blocks are defined using <*block*>as the start tag and

<*/*>as the end tag.

When a block ends, font styles will be restored to the state before entering the block.Embedding Images
CDML supports embedding images in text using the following syntax:

<*img=my_image_file.png*>
where my_image_file.png is the path name of the image file.

For example, the line:

<*size=20*>A <*img=sun.png*>day
will result in the following text rendered:

ChartDirector will automatically detect the image file format using the file extension, which must either png, jpg, jpeg, gif, wbmp or wmp (case insensitive).

Please refer to BaseChart.setSearchPath or DrawArea.setSearchPath on the directory that ChartDirector will search for the file.

The <*img*>tag may optionally contain width and height attributes to specify its pixel width and height. In this case, ChartDirector will stretch or compress the image if necessary to the required width and height.Blocks Attributes
CDML supports nesting blocks, that is, a block can contain other sub-blocks. Attributes are supported in the <*block*>tag to control the alignment and orientation of the sub-blocks. The <*img=my_image_file.png*>is treated as a block for layout purposes.

For example, the line:

<*block,valign=absmiddle*><*img=molecule.png*><*block*>Hydrazino\nMolecule<*/*><*/*>
will result in the following text rendered:

The the above starts <*block,valign=absmiddle*>which specifies its content should align with each others in the vertical direction using the absolute middle alignment. The block contains an image, followed by a space characters, and then another block which has two lines of text.

The following table describes the supported attributes inside <*block*>tag:

AttributeDescription

The value baseline means the baseline of sub-blocks should align with the baseline of the block. The baseline

width	The width of the block in pixels. By default, the width is automatically determined to be the width necessary for the contents of the block. If the width attribute is specified, it will be used as the width of the block. If the width is insufficient for the contents, the contents will be wrapped into multiple lines.
height	The height of the block in pixels. By default, the height is automatically determined to be the height necessary for the contents of the block. If the height attribute is specified, it will be used as the height of the block.
maxwidth	The maximum width of the block in pixels. If the content is wider than maximum width, it will be wrapped into multiple lines.
truncate	The maximum number of lines of the block. If the content requires more than the maximum number of lines, it will be truncated. In particular, if truncate is 1, the content will be truncated if it exceeds the maximum width (as specified by maxwidth or width) without wrapping. The last few characters at the truncation point will be replaced with "...".
linespacing	The spacing between lines as a ratio to the default line spacing. For example, a line spacing of 2 means the line spacing is two times the default line spacing. The default line spacing is the line spacing as specified in the font used.
bgColor	The background color of the block in hex format.
valign	The vertical alignment of sub-blocks. This is for blocks that contain sub-blocks. Supported values are baseline, top, bottom, middle and absmiddle.

is the underline position of text. This is normal method of aligning text, and is the default in CDML. For images or blocks that are rotated, the baseline is the same as the bottom.

The value top means the top line of sub-blocks should align with the top line of the block.

The value bottom means the bottom line of sub-blocks should align with the bottom line of the block.

The value middle means the middle line of sub-blocks should align with the the middle line of the block. The middle line is the middle position between the top line and the baseline.

The value absmiddle means the absolute middle line of sub-blocks should align with the absolute middle line of the block. The absolute middle line is the middle position between the top line and the bottom line.

halign	The horizontal alignment of lines. This is for blocks that contain multiple lines. Supported values are left, center and right.

The value left means the left border of each line should align with the left border of the block. This is the default.

The value center means the horizontal center of each line should align with the horizontal center of the block.

The value right means the right border of each line should align with the right border of the block.

angle	Rotate the content of the block by an angle. The angle is specified in degrees in counter-clockwise direction.

6.0.27 ChartDirector: Parameter Substitution and Formatting

Plugin Version: 8.2, Platforms: macOS, Linux, Windows.

Answer: ChartDirector: Parameter Substitution and Formatting
Notes: ChartDirector charts often contain a lot of text strings. For example, sector labels in pie charts, axis labels for x and y axes, data labels for the data points, HTML image maps, etc, are all text strings.

ChartDirector uses parameter substitution to allow you to configure precisely the information contained in the text and their format.
Format Strings
In parameter substitution, format strings are used to specify the entities to be include into labels and how to format numbers and dates.

For example, when drawing a pie chart with side label layout, the default sector label format string is:

" { label } ({ percent } %)"

When the sector label is actually drawn, ChartDirector will replace " { label } " with the sector name, and " { percent } " with the sector percentage. So the above label format will result is a sector label similar to "ABC (34.56%)".

You may change the sector label format by changing the format string. For example, you may change it to:

" { label } : US$ { value | 2 } K ({ percent } %)"

The sector label will then become something like "ABC: US$ 123.00 (34.56%)".

In general, in ChartDirector parameter substitution, parameters enclosed by curly brackets will be substituted with their actual values when creating the texts.

For parameters that are numbers or dates/times, ChartDirector supports a special syntax in parameter substitution to allow formatting for these values. Please refer to the Number Formatting and Date/Time Formatting sections below for details.

Parameter Expressions

ChartDirector supports numeric expressions in format strings. They are denoted by enclosing the expression with curly brackets and using "=" as the first character. For example:

"USD { value } (Euro { = { value } *0.9 })"

In the above, " { value } " will be substituted with the actual value of the sector. The expression " { = { value } *0.9 } " will be substituted with the actual value of the sector multiplied by 0.9.

ChartDirector parameter expressions support operators "+", "-", "*", "/", "%" (modulo) and "^" (exponentiation). Operators "*", "/", "%", "^" is computed first, followed by "+" and "-". Operators of the same precedence are computed from left to right). Parenthesis "(" and ")" can be used to change the computation order.

Parameters for Pie Charts

The following table describes the parameters available for pie charts.

Parameter	Description
sector	The sector number. The first sector is 0, while the nth sector is (n-1).
dataSet	Same as { sector } . See above.
label	The text label of the sector.
dataSetName	Same as { label } . See above.
value	The data value of the sector.
percent	The percentage value of the sector.
fieldN	The (N + 1)th extra field. For example, { field0 } means the first extra field. An extra field is an array of custom elements added using BaseChart.addExtraField or BaseChart.addExtraField2.

Parameters for All XY Chart Layers

The followings are parameters that are apply to all XY Chart layers in general. Some layer types may have additional parameters (see below).

Note that certain parameters are inapplicable in some context. For example, when specifying the aggregate label of a stacked bar chart, the { dataSetName } parameter is inapplicable. It is because a stacked bar is composed of multiple data sets. It does not belong to any particular data set and hence does not have a data set name.

{ fieldN } means the extra field is indexed by the data point number. The Pth data point corresponds to the Pth element of the extra field.

Additional Parameters for Line Layers
The followings are parameters that are in additional to the parameters for all XY Chart layers.

Additional Parameters for Trend Layers
The followings are parameters that are in additional to the parameters for all XY Chart layers.

Additional Parameters for Box-Whisker Layers
The followings are parameters that are in additional to the parameters for all XY Chart layers.

Additional Parameters for HLOC and CandleStick Layers
The followings are parameters that are in additional to the parameters for all XY Chart layers.

Additional Parameters for Vector Layers
The followings are parameters that are in additional to the parameters for all XY Chart layers.

Parameters for All Polar Layers
The followings are parameters that are apply to all Polar Chart layers in general. Some layer types may
have additional parameters (see below).

{ fieldN } means the extra field is indexed by the data point number. The Pth data point corresponds to
the Pth element of the extra field.

Additional Parameters for PolarVector Layers
The followings are parameters that are in additional to the parameters for all Polar Chart layers.

Parameters for Axis
The following table describes the parameters available for pie charts.

Number Formatting
For parameters that are numbers, ChartDirector supports a number of formatting options in parameter
substitution.

For example, if you want a numeric field { value } to have a precision of two digits to the right of the decimal
point, use ',' (comma) as the thousand separator, and use '.' (dot) as the decimal point, and you may use {
value | 2,. } . The number 123456.789 will then be displayed as 123,456.79.

For numbers, the formatting options are specified using the following syntax:

{ [param] | | [a] [b] [c] [d] }

where:

If this field starts with "E" or "e", followed by a number, it means formatting the value using scientific notation with the specified number of decimal places. If the "E" or "e" is not followed by a number, 3 is assumed.

For example, { value | E4 } will format the value 10.3 to 1.0300E+1, and { value | e4 } will format the same value to 1.0300e+1.

If this field starts with "G" or "g", followed by a number, it means formatting the value using the scientific notation only if the value is large and requires more than the specified number of digits, or the value is less than 0.001. If scientific notation is used, the number following "G" or "g" also specifies the number of significant digits to use. If the "G" or "g" is not followed by a number, 4 is assumed.

For example, consider the format string { value | G4 } . The value 10 will be formatted to 10. The value 100000 will be formatted to 1.000E+5. Similarly, for { value | g4 } , the value 10 will be formatted to 10, while the value 100000 will be formatted to 1.000e+5.

If you skip this argument, ChartDirector will display the exact value using at most 6 decimal places.

You may skip [b] [c] [d] . In this case, the default will be used.

Date/Time Formatting
For parameters that are dates/times, the formatting options can be specified using the following syntax:

{ [param] | [datetime_format_string] }

where [datetime_format_string] must start with an english character (A-Z or a-z) that is not "G", "g", "E" or "e", and may contain any characters except ' } '. (If it starts with "G", "g", "E" or "e", it will be considered as a number format string.)

Certain characters are substituted according to the following table. Characters that are not substituted will be copied to the output.

For example, a parameter substitution format of { value | mm-dd-yyyy } will display a date as something similar to 09-15-2002. A format of { value | dd/mm/yy hh:nn:ss a } will display a date as something similar to 15/09/02 03:04:05 pm.

If you want to include characters in the format string without substitution, you may enclose the characters in single or double quotes.

For example, the format { value | mmm '<*color=dd0000*>'yyyy } will display a date as something like Jan <*color=dd0000*>2005 (the <*color=dd0000*>is a CDML tag to specify red text color). Note that the <*color=dd0000*>tag is copied directly without substitution, even it contains "dd" which normally will be substituted with the day of month.

Escaping URL/HTML/CDML characters

Parameter substitution is often used to create HTML image maps. In HTML, some characters has special meanings and cannot be used reliably. For example, the '>' is used to represent the end of an HTML tag.

Furthermore, if the field happens to be used as an URL, characters such as '?', '&' and '+' also have special meanings.

By default, ChartDirector will escape template fields used in URL and query parameters when generating image maps. It will modify URL special characters to the URL escape format "%XX" (eg. "?" will become "%3F"). After that, it will modify HTML special characters to the HTML escape format "&amps;#nn;" (eg. ">" will become "&amps;#62;".). Similarly, it will escape other attributes in the image map using HTML escape format (but not URL escape format).

In addition to escaping HTML and URL special characters, ChartDirector will also remove CDML fields in creating image maps. It is because CDML is only interpreted in ChartDirector, should not be useful outside of ChartDirector (such as in browser tool tips).

In some cases, you may not want ChartDirector to escape the special characters. For example, if the parameters have already been escaped before passing to ChartDirector, you may want to disable ChartDirector from escaping them again.

ChartDirector supports the following special fields to control the escape methods - " { escape_url } ", " { noescape_url } ", " { escape_html } ", " { noescape_html } ", " { escape_cdml } " and { noescape_cdml } ". These fields enable/disable the escape methods used in the template fields that follow them.

6.0.28   ChartDirector: Shape Specification

Plugin Version: 8.2, Platforms: macOS, Linux, Windows.

Answer: ChartDirector: Shape Specification
Notes: Several ChartDirector API accept shape specification as arguments. For example, BarLayer.setBarShape and BarLayer.setBarShape2 can be used to specify shapes of bars in bar charts, while DataSet.setDataSymbol, DataSet.setDataSymbol4, PolarLayer.setDataSymbol and PolarLayer.setDataSymbol4 can be used to specify shapes for data symbols.

Note that in addition to shapes, in many cases ChartDirector also accepts images or custom draw objects for data representation. For example, see DataSet.setDataSymbol2, DataSet.setDataSymbol3, PolarLayer.setDataSymbol2 and PolarLayer.setDataSymbol3.

Built-In Shapes

Built-in shapes are specified as integers. The integers can be explicit constants, or can be generated by a ChartDirector method for parameterized shapes. For example, a circle is represented by an explicit constant CircleShape (=7). On the other hand, the number representing a polygon depends on the number of sides the polygon has, so it is generated by using the PolygonShape method, passing in the number of sides as argument.

The following table illustrates the various ChartDirector shapes:

Custom Shapes

In ChartDirector, custom shapes are specified as an array of integers x0, y0, x1, y1, x2, y2 ... representing the coordinates of the vertices of the custom polygonal shape.

The polygon should be defined with a bounding square of 1000 x 1000 units, in which the x-axis is from -500 to 500 going from left to right, and the y-axis is from 0 to 1000 going from bottom to top.

ChartDirector will automatically scale the polygon so that 1000 units will become to the pixel size as requested by the various ChartDirector API.

As an example, the shape of the standard diamond shape in ChartDirector is represented as an array with 8 numbers:

0, 0, 500, 500, 0, 1000, -500, 500

6.0.29   Copy styled text?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: How to quickly copy styled text from one textarea to another?
Example:

```
#if TargetWin32 then
TextArea1.WinRTFDataMBS = TextArea2.WinRTFDataMBS
#elseif TargetMacOS then
TextArea1.NSTextViewMBS.textStorage.setAttributedString TextArea2.NSTextViewMBS.textStorage
#else
TextArea1.StyledText = TextArea2.StyledText
#endif
```

Notes: The code above uses special plugin functions on Mac and Windows and falls back to framework for Linux.

6.0.30 Do you have code to validate a credit card number?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can check the checksum to tell if a credit card number is not valid.
Example:

```
Dim strNumber As String
Dim nLength as Integer
Dim nValue as Integer
Dim nChecksum as Integer
Dim nIndex as Integer

strNumber = EditField1.Text
nLength = Len(strNumber)
nChecksum = 0

For nIndex = 0 To nLength - 2
nValue = Val(Mid(strNumber, nLength - (nIndex + 1), 1)) * (2 - (nIndex Mod 2))
If nValue <10 Then
nChecksum = nChecksum + nValue
Else
nChecksum = nChecksum + (nValue - 9)
End If
Next

If Val(Mid(strNumber, Len(strNumber), 1)) = (10 - (nChecksum Mod 10)) Mod 10 Then
MsgBox("The credit card number looks valid")
Else
MsgBox("The credit card number is invalid")
End IF
```

Notes: Here's some code that will validate the checksum for a credit card. It works for Visa, MasterCard, American Express and Discover. Not sure about others, but I imagine they use the same basic algorithm. Of course, this doesn't actually mean that the credit card is valid, it's only useful for helping the user catch typos.

The above code doesn't have any error checking and it expects that the credit card number will be entered without spaces, dashes or any other non-numeric characters. Addressing those issues will be an exercise left to the reader. :)

(From Mike Stefanik)

6.0.31 Do you have plugins for X-Rite EyeOne, eXact or i1Pro?

Plugin Version: all.

Answer: Our EyeOne plugin is available on request for licensees of the X-Rite SDKs.
Notes: Please first go to X-Rite and get a SDK license.
Than we can talk about the plugin.

6.0.32 Does SQL Plugin handle stored procedures with multiple result sets?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Yes, the plugin can work with multiple recordsets.
Notes: You need to use SQLCommandMBS class. When you get back results, you use FetchNext to walk over all records in the first result set. Than you simply start again with FetchNext to get the second record set.
Even the RecordSet functions should work, just use them twice to get all records from both record sets.

6.0.33 Does the plugin home home?

Plugin Version: all, Platform: macOS.

Answer: Yes, we like to know who is using the plugin, so the plugin may contact our server.
Example:

none.

Notes: Please note that this does not affect your users as the plugin will only do this in the IDE and the relevant plugin part is never included in your applications.

The plugin if used for some hours, does contact our server to provide statistical data about Xojo version and OS versions. This way we know what versions are used. We can return the version number of the current plugin which may be visible in future versions somehow. And we transmit partial licenses data so we can track use of illegal license keys.

If you do not like to have this, you can block Xojo IDE from contacting our website via your Firewall. Blocking the transfer will not disable the plugin or change the features.
Or contact us for a plugin version which explicitly does not contain this feature.

6.0.34 folderitem.absolutepath is limited to 255 chars. How can I get longer ones?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Paths on a Mac are not unique, so use them only to display them to the user.
Example:

Function AbsolutePath(f as FolderItem) As String
Dim s as string
Dim nf as FolderItem
nf = f
s = ""
while nf<>nil
s = nf.name + ":" + s
nf = nf.parent
wend
Return s
End Function

6.0.35 Has anyone played round with using CoreImage to do things like add dissolve transitions say when changing from one tab to another within a window?

Platform: macOS.

Answer: This code implements animations for a tabpanel change:
Example:

// in a tabpanel.change event:

dim r as CGSTransitionRequestMBS
dim co as new CGSConnectionMBS
dim cw as CGSWindowMBS
dim ct as CGSTransitionMBS
static OldTab as Integer

cw=co.CGSWindow(window1)
If cw = Nil Then
return // 10.3...
End If
r=new CGSTransitionRequestMBS
r.TransitionType=r.CGSFlip
r.HasBackGround=false
r.HasBackColor=false
r.Win=cw

```
// watch the value of the clicked tab versus the last tab
if tabpanel1.Value=0 or tabpanel1.Value <OldTab then
r.TransitionOption=r.CGSLeft
ct=co.NewTransition(r)
if ct<>Nil then
Refresh
ct.Invoke(1)
ct.Wait(1)
ct.Release
else
MsgBox "Error creating the transition."
end if
else
r.TransitionOption=r.CGSRight
ct=co.NewTransition(r)
if ct<>Nil then
Refresh
ct.Invoke(1)
ct.Wait(1)
ct.Release
else
MsgBox "Error creating the transition."
end if
end if
// Keep track of the last tab clicked
OldTab = tabpanel1.Value
```

Notes: See CGS* classes for more details.

6.0.36   How about Plugin support for older OS X?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: We support in general Mac OS X 10.5 and newer.
Notes: All the 64-bit plugins on Mac require OS X 10.7.
Intel 32-bit plugins on Mac require OS X 10.5 or newer.

Currently the ChartDirector 6, GraphicsMagick and GameKit plugins requires Mac OS X 10.6.
Also for SQL Plugin the built in SQLite library requires 10.6.

6.0.37 How can I detect whether an Intel CPU is a 64bit CPU?

Plugin Version: all.

Answer: Look on the CPU family returned by sysctl:
Example:

Function is64bit() As Boolean

#if TargetLittleEndian

dim m as MemoryBlock = NewMemoryBlock(8)
dim family as Integer
dim s as string

m=SystemControlNameToMIBMBS("hw.cpufamily")
m=SystemControlMBS(m)

if m<>nil then
m.LittleEndian=True
family=m.Long(0)

const CPUFAMILY_INTEL_6_14 = &h73d67300 //* "Intel Core Solo" and "Intel Core Duo" (32-bit Pentium-M with SSE3) */
const CPUFAMILY_INTEL_6_15 = &h426f69ef //* "Intel Core 2 Duo" */
const CPUFAMILY_INTEL_6_23 = &h78ea4fbc //* Penryn */
const CPUFAMILY_INTEL_6_26 = &h6b5a4cd2 //* Nehalem */

Select case family
case CPUFAMILY_INTEL_6_14
Return false
case CPUFAMILY_INTEL_6_15
Return true
case CPUFAMILY_INTEL_6_23
Return true
case CPUFAMILY_INTEL_6_26
Return true
// newer CPUs may be missing here
end Select

end if

#endif

Return false

Exception
Return false
End Function

Notes: This code is written for Mac OS X where you only have a limited number of possible CPUs.

6.0.38   How can I disable the close box of a window on Windows?

Plugin Version: all, Platform: Windows.

Answer: The following code will remove the close item from the system menu of the window.
Example:

```
#if TargetWin32 then
Declare Function GetSystemMenu Lib "user32" (hwnd as Integer, bRevert as Integer) as Integer
Declare Function RemoveMenu Lib "user32" (hMenu as Integer, nPosition as Integer, wFlags as Integer) as
Integer
Dim hSysMenu as Integer
hSysMenu = GetSystemMenu(me.WinHWND, 0)
RemoveMenu hSysMenu, &HF060, &H0
#endif
```

Notes: The window may not be updated directly.

6.0.39   How can I get all the environment variables from Windows?

Plugin Version: all, Platform: Windows.

Answer: Try this code:
Example:

```
#if targetWin32
declare function GetEnvironmentStrings Lib "kernel32" () as ptr
dim m as memoryBlock
dim n as Integer

m=GetEnvironmentStrings()

n=0
do
msgBox m.cstring(n)
while m.byte(n)<>0
n=n+1
wend
n=n+1
```

```
loop until m.byte(n)=0
#endif
```

Notes: The MBS Plugin has an EnvironmentMBS class for this.

6.0.40 How can i get similar behavior to Roxio Toast or iTunes where clicking a 'burn' button allows the next inserted blank CD-R to bypass the Finder and be accepted by my application?

Plugin Version: all, Platform: macOS.

Answer: You need to get a media reservation.
Example:

```
dim d as DRDeviceMBS // get a device
d.AcquireMediaReservation
```

Notes: Use the plugin function AcquireMediaReservation and later release it using ReleaseMediaReservation.
See plugin examples on how to use it and check Apples DiscRecording framework documentation for more details.

6.0.41 How can I get text from a PDF?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Crossplatform you can use DynaPDF Pro.
Notes: On Mac OS X you can also use PDFKit for the same job.
While DynaPDF Pro gives you each bit of text with rotation, font information and encoding details, PDFKit gives you only the text string for a PDF page.

6.0.42 How can I get text from a Word Document?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: to get the text string from a doc file, use the NSAttributedStringMBS class.
Notes: The NSAttributedStringMBS class is Mac OS X only and we have currently no solution for Windows or Linux.

Use the NSAttributedStringMBS.initWithDocFormat(data as string) as boolean method.

6.0.43   How can I get the item string for a given file creator?

Plugin Version: all.

Answer: Try this function:
Example:

Sub pullNativeDocs(aCREA As string)
Dim result as Integer
Dim m, k as memoryBlock
Dim f as folderItem
Dim newType as string
Dim anIcon As picture
Dim ofs as Integer

Declare Function GetFileTypesThatAppCanNativelyOpen Lib "Carbon" (appVRefNumHint as Short, appSignature as OSType, nativeTypes as Ptr) as Short Inline68K("701CABFC")
Declare Function GetDocumentKindString Lib "Carbon" (docVRefNum as Short, docType as OSType, docCreator as OSType, kindString as ptr) as Short Inline68K("7016ABFC")

listBox1.deleteAllRows

m = newMemoryBlock(1024)
result = GetFileTypesThatAppCanNativelyOpen(Volume(0).MacVRefNum, aCREA, m)
if result <>0 then
listBox1.addRow "<Not found.>"
return
end if

do
if m.byte(ofs*4) = 0 then
exit
else
newType = m.OSTypeMBS(ofs*4)
listBox1.addRow newType
k = newMemoryBlock(64)
result = GetDocumentKindString(Volume(0).MacVRefNum, newType, aCREA, k)
if result = 0 then
listBox1.cell(ofs,1) = k.pString(0)
ofs = ofs + 1
else
listBox1.cell(ofs,1) = "(unknown)"
end if

end if

loop

End Sub

Notes: Change "Translation" to "CarbonLib" for Mac OS X.

6.0.44   How can I launch an app using it's creator code?

Plugin Version: all, Platform: macOS.

Answer: Send an AppleEvent "odoc" with the creator code to the Finder ("MACS"):
Example:

Function LaunchByCreator(C As String) As Boolean
Dim A As AppleEvent
A = NewAppleEvent("aevt","odoc","MACS")
A.ObjectSpecifierParam("—-") = GetUniqueIDObjectDescriptor("appf",nil,C)
return A.Send
End Function

6.0.45   How can I learn what shared libraries are required by a plugin on Linux?

Plugin Version: all, Platform: macOS.

Answer: Please use the ldd command in the terminal.
Notes: You build an app on any platform, but for Linux.
For the resulting .so files in the libs folder, you can run the ldd command with the library path as parameter.
It shows you references lib files and you can make sure you have those installed.

This is a sample run of our graphicsmagick plugin:

cs@Ubuntu32:
textasciitilde /MeinProgramm/MeinProgramm Libs$ ldd libMBSGraphicsMagickPlugin17744.so
linux-gate.so.1 =>(0xb76ee000)
libdl.so.2 =>/lib/i386-linux-gnu/libdl.so.2 (0xb6f0e000)
libgtk-x11-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgtk-x11-2.0.so.0 (0xb6aa6000)
libpthread.so.0 =>/lib/i386-linux-gnu/libpthread.so.0 (0xb6a8a000)
libstdc++.so.6 =>/usr/lib/i386-linux-gnu/libstdc++.so.6 (0xb69a5000)
libm.so.6 =>/lib/i386-linux-gnu/libm.so.6 (0xb6979000)
libgcc_s.so.1 =>/lib/i386-linux-gnu/libgcc_s.so.1 (0xb695b000)
libc.so.6 =>/lib/i386-linux-gnu/libc.so.6 (0xb67b1000)

/lib/ld-linux.so.2 (0xb76ef000)
libgdk-x11-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgdk-x11-2.0.so.0 (0xb6701000)
libpangocairo-1.0.so.0 =>/usr/lib/i386-linux-gnu/libpangocairo-1.0.so.0 (0xb66f4000)
libX11.so.6 =>/usr/lib/i386-linux-gnu/libX11.so.6 (0xb65c0000)
libXfixes.so.3 =>/usr/lib/i386-linux-gnu/libXfixes.so.3 (0xb65ba000)
libatk-1.0.so.0 =>/usr/lib/i386-linux-gnu/libatk-1.0.so.0 (0xb659a000)
libcairo.so.2 =>/usr/lib/i386-linux-gnu/libcairo.so.2 (0xb64ce000)
libgdk_pixbuf-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgdk_pixbuf-2.0.so.0 (0xb64ad000)
libgio-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgio-2.0.so.0 (0xb6356000)
libpangoft2-1.0.so.0 =>/usr/lib/i386-linux-gnu/libpangoft2-1.0.so.0 (0xb632a000)
libpango-1.0.so.0 =>/usr/lib/i386-linux-gnu/libpango-1.0.so.0 (0xb62e0000)
libfontconfig.so.1 =>/usr/lib/i386-linux-gnu/libfontconfig.so.1 (0xb62ab000)
libgobject-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgobject-2.0.so.0 (0xb625c000)
libglib-2.0.so.0 =>/lib/i386-linux-gnu/libglib-2.0.so.0 (0xb6163000)
libXext.so.6 =>/usr/lib/i386-linux-gnu/libXext.so.6 (0xb6151000)
libXrender.so.1 =>/usr/lib/i386-linux-gnu/libXrender.so.1 (0xb6147000)
libXinerama.so.1 =>/usr/lib/i386-linux-gnu/libXinerama.so.1 (0xb6142000)
libXi.so.6 =>/usr/lib/i386-linux-gnu/libXi.so.6 (0xb6132000)
libXrandr.so.2 =>/usr/lib/i386-linux-gnu/libXrandr.so.2 (0xb6129000)
libXcursor.so.1 =>/usr/lib/i386-linux-gnu/libXcursor.so.1 (0xb611e000)
libXcomposite.so.1 =>/usr/lib/i386-linux-gnu/libXcomposite.so.1 (0xb611a000)
libXdamage.so.1 =>/usr/lib/i386-linux-gnu/libXdamage.so.1 (0xb6115000)
libfreetype.so.6 =>/usr/lib/i386-linux-gnu/libfreetype.so.6 (0xb607b000)
libxcb.so.1 =>/usr/lib/i386-linux-gnu/libxcb.so.1 (0xb605a000)
libpixman-1.so.0 =>/usr/lib/i386-linux-gnu/libpixman-1.so.0 (0xb5fc2000)
libpng12.so.0 =>/lib/i386-linux-gnu/libpng12.so.0 (0xb5f98000)
libxcb-shm.so.0 =>/usr/lib/i386-linux-gnu/libxcb-shm.so.0 (0xb5f93000)
libxcb-render.so.0 =>/usr/lib/i386-linux-gnu/libxcb-render.so.0 (0xb5f89000)
libz.so.1 =>/lib/i386-linux-gnu/libz.so.1 (0xb5f73000)
libgmodule-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgmodule-2.0.so.0 (0xb5f6e000)
libselinux.so.1 =>/lib/i386-linux-gnu/libselinux.so.1 (0xb5f4f000)
libresolv.so.2 =>/lib/i386-linux-gnu/libresolv.so.2 (0xb5f36000)
libexpat.so.1 =>/lib/i386-linux-gnu/libexpat.so.1 (0xb5f0c000)
libffi.so.6 =>/usr/lib/i386-linux-gnu/libffi.so.6 (0xb5f05000)
libpcre.so.3 =>/lib/i386-linux-gnu/libpcre.so.3 (0xb5ec9000)
librt.so.1 =>/lib/i386-linux-gnu/librt.so.1 (0xb5ec0000)
libXau.so.6 =>/usr/lib/i386-linux-gnu/libXau.so.6 (0xb5ebb000)
libXdmcp.so.6 =>/usr/lib/i386-linux-gnu/libXdmcp.so.6 (0xb5eb4000)
cs@Ubuntu32:
textasciitilde /MeinProgramm/MeinProgramm Libs$

As you see all library have been found and their load address is printed behind the na,e.
If a library is missing, you usually see the address missing there or being zero.

6.0.46 How can I validate an email address?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can try this code:
Example:

```
Dim re As RegEx
re = New RegEx
Dim rm As RegExMatch

re.SearchPattern = " [ a-z0-9!#$ %&'*+/=?^_' { | }
textasciitilde - ] +(?:\. [ a-z0-9!#$ %&'*+/=?^_' { | }
textasciitilde - ] +)*@(?: [ a-z0-9 ] (?: [ a-z0-9- ] * [ a-z0-9 ] )?\.)+ [ a-z0-9 ] (?: [ a-z0-9- ] * [ a-z0-9 ] )?"
rm = re.Search(editField1.Text)

if rm = Nil Then
StaticText2.text = editField1.Text + " not valid email"
Else
StaticText2.Text = editField1.Text + " is valid"
End if
```

Notes: Adapted from:
http://www.regular-expressions.info/email.html

6.0.47 How do I decode correctly an email subject?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: The following code can be used to decode an email subject including several encodings including Base 64.
Example:

```
dim src as string // input

dim theRegex as Regex
dim theRegexMatch as RegexMatch
dim result, infoCharset, encodedPart as string
dim theStart as Integer

if instr(src, "=?") >0 then
theRegex = new Regex
theRegex.Options.Greedy = false
theRegex.searchPattern = "(.*)=\?(.+)\?(Q | B)\?(.+)\?="
theRegexMatch = theRegex.search(src)
```

```
while theRegexMatch <>nil
theStart = theRegexMatch.subExpressionStartB(0) + len(theRegexMatch.subExpressionString(0))

result = result + theRegexMatch.subExpressionString(1)
infoCharset = theRegexMatch.subExpressionString(2)
encodedPart = theRegexMatch.subExpressionString(4)
if theRegexMatch.subExpressionString(3) = "B" then
encodedPart = DecodeBase64(encodedPart)
elseif theRegexMatch.subExpressionString(3) = "Q" then
encodedPart = DecodeQuotedPrintable(encodedPart)
end if
if right(result, 1) = " " then
result = mid(result, 1, len(result)-1)
end if
encodedPart = encodedPart.DefineEncoding(GetInternetTextEncoding(infoCharset))
result = result + encodedPart

theRegex.SearchStartPosition = theStart
theRegexMatch = theRegex.search()
wend

result = result + mid(src, theStart+1)

else
result = src
end if
// theRegexMatch = theRegex.search

msgbox result
```

Notes: May not look nice depending on the controls used.
This is no longer needed when using MimeEmailMBS class which decodes for you.

6.0.48   How do I enable/disable a single tab in a tabpanel?

Plugin Version: all, Platform: macOS.

Answer: Use the TabpanelEnabledMBS method.
Example:

```
TabpanelEnabledMBS(tabpanel1, 1, false)
```

Notes: Use Carbon for MachO and CarbonLib for Mac Carbon and AppearanceLib for Mac OS Classic as

library.

For Cocoa, please use enabled property of NSTabViewItemMBS class.

6.0.49 How do I find the root volume for a file?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Try this function:
Example:

```
Function GetRootVolume(f as FolderItem) as FolderItem
dim root, dum as folderItem
if f <>nil then
root = f // f might be the volume
do
dum = root.parent
if dum <>nil then
root = dum
end if
loop until dum = nil
return root
end if
End Function
```

6.0.50 How do I get the current languages list?

Plugin Version: all, Platform: macOS.

Answer: Try this code:
Example:

```
dim p as new CFPreferencesMBS
dim a as CFArrayMBS
dim s as CFStringMBS
dim o as CFObjectMBS
dim sa(-1) as string

o=p.CopyAppValue("AppleLanguages",".GlobalPreferences")

if o<>Nil then
a=CFArrayMBS(o)

dim i,c as Integer
```

```
c=a.Count-1
for i=0 to c
o=a.Item(i)

if o isa CFStringMBS then
s=CFStringMBS(o)
sa.Append s.str
end if
next
end if

MsgBox Join(sa,EndOfLine)
```

Notes: On Mac OS X you can get the list of current languages like this list:

```
de
en
ja
fr
es
it
pt
pt-PT
nl
sv
nb
da
fi
ru
pl
zh-Hans
zh-Hant
ko
```

Which has German (de) on the top for a German user.
This code has been tested on Mac OS X 10.5 only.

6.0.51   How do I get the Mac OS Version?

Plugin Version: all, Platform: macOS.

Answer: Try this code:
Example:

```
dim i as Integer
if system.gestalt("sysv", i) then
//do this in an 'If' in case you don't get any value back at all and system.gestalt returns boolean
if i = &h750 then //If OS is 7.5
//do stuff
elseif i = &h761 then //If OS is 7.6.1
//do stuff
end if
end if
```

Notes: The MBS Plugin has a function SystemInformationMBS.OSVersionString for this.

6.0.52 How do I get the printer name?

Plugin Version: all.

Answer: For Mac OS Classic see the code below and for Mac OS X use the Carbon Print Manager Classes from the MBS Plugin.
Example:

```
dim s as String
dim i as Integer

s=app.ResourceFork.GetResource("STR ",-8192)
if s<>"" then
i=ascb(leftb(s,1))
s=mid(s,2,i)

MsgBox s
end if
```

Notes: A note from Craig Hoyt:

After looking at your example I had a little deja-vu experience. Several
years ago I played around with this same code if FutureBasic. I discovered
that it did not and still doesn't provide the 'Printer Name', it does
return the print driver name. If it returns 'LaserWriter 8' as the print
driver you can look into this file and get the 'PAPA' resource #-8192 to
get the actual Printer Name. Unfortunately this does not hold true for
other printers. My Epson and HP Printers (the Epson has an Ethernet Card
and the HP is USB) do not provide this info in their drivers. As far as I
can tell it only returns the name by polling the printer itself.

6.0.53   How do I make a metal window if RB does not allow me this?

Plugin Version: all, Platform: macOS.

Answer: The following declare turns any window on Mac OS X 10.2 or newer into a metal one.
Example:

declare sub ChangeWindowAttributes lib "Carbon" (win as windowptr, a as Integer, b as Integer)

ChangeWindowAttributes window1,256,0

Notes: May not look nice depending on the controls used.

6.0.54   How do I make a smooth color transition?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

I'd like to show in a report some bars, which start with color A
and end with color B.

The color change should be very smooth.

My problem: If I would start from 255,0,0 and end by 0,0,0, I would have
255 different colors. If the bars are longer than 255 pixels, would
this look nice?
Example:

```
// Window.Paint:
Sub Paint(g As Graphics)
dim w,w1,x,p as Integer
dim c1,c2,c as color
dim p1,p2 as Double

c1=rgb(255,0,0) // start color
c2=rgb(0,255,0) // end color

w=g.Width
w1=w-1

for x=0 to w1
p1=x/w1
p2=1.0-p1
```

c=rgb(c1.red*p1+c2.red*p2, c1.green*p1+c2.green*p2, c1.blue*p1+c2.blue*p2)

g.ForeColor=c
g.DrawLine x,0,x,g.Height

next
End Sub

Notes:

Try the code above in a window paint event handler.

6.0.55   How do I read the applications in the dock app?

Plugin Version: all, Platform: macOS.

Answer: Use CFPreferencesMBS class like in this example:
Example:

// Reads file names from persistent dock applications and puts them into the list

dim pref as new CFPreferencesMBS

dim persistentapps as CFStringMBS = NewCFStringMBS("persistent-apps")
dim ApplicationID as CFStringMBS = NewCFStringMBS("com.apple.dock")
dim tiledata as CFStringMBS = NewCFStringMBS("tile-data")
dim filelabel as CFStringMBS = NewCFStringMBS("file-label")

// get the array of persistent applications from dock preferences
dim o as CFObjectMBS = pref.CopyValue(persistentapps, ApplicationID, pref.kCFPreferencesCurrentUser, pref.kCFPreferencesAnyHost)

if o isa CFArrayMBS then
dim a as CFArrayMBS = CFArrayMBS(o)

// walk over all items in array
dim c as Integer = a.Count-1
for i as Integer = 0 to c

// get dictionary describing item
o = a.Item(i)

if o isa CFDictionaryMBS then
dim d as CFDictionaryMBS = CFDictionaryMBS(o)

```
// and pick tile data dictionary
o = d.Value(tiledata)
if o isa CFDictionaryMBS then
d = CFDictionaryMBS(o)

// and pick there the file label
o = d.Value(filelabel)
if o isa CFStringMBS then
// and display it
dim name as string = CFStringMBS(o).str
List.AddRow name
end if
end if
end if

next

else
MsgBox "Failed to read dock preferences."
end if
```

Notes: You can use the CFPreferencesMBS.SetValue to change a value and CFPreferencesMBS.Synchronize to write the values to disc. You may need to restart the Dock.app if you modified things.

6.0.56   How do I truncate a file?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: In a binarystream you can set the length property to truncate.

6.0.57   How do update a Finder's windows after changing some files?

Plugin Version: all, Platform: macOS.

Answer: Try this code:
Example:

```
dim f as folderitem // some file
dim ae as appleevent
ae=newappleevent("fndr","fupd","MACS")
ae.folderitemparam("---")=f
if not ae.send then
//something went wrong
```

end if

Notes: The folderitem.finderupdate from the MBS Plugin does something like this.

6.0.58   How to access a USB device directly?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: First, it depends on the device.
Notes: Some devices can be talked directly from user mode code, but some require a kernel driver.

For some devices you can use plugins to access them like:

- Audio and Video sources using the QTGrabberClassMBS

- Mass storage devices using the folderitem class.

- Serial devices using the System.SerialPort function.

- HID USB devices can be used with MacHIDMBS, WinHIDMBS or LinuxHIDInterface class.

- Any USB device may be used with MacUSBMBS or WinUSBMBS classes.

In general it is always the best to take the most high level access to have others do the work for the details.

6.0.59   How to add icon to file on Mac?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use FolderItem.AddCustomIcon or NSWorkspaceMBS.setIcon functions.
Notes: Please close any open stream for the file you want to add an icon.

6.0.60   How to ask the Mac for the Name of the Machine?

Plugin Version: all, Platform: macOS.

Answer: Using Apple Events you can use this code:
Example:

Function Computername() As string

```
dim theEvent as AppleEvent
dim err as boolean

theEvent = newAppleEvent("mchn","getd","MACS")

err = theEvent.send

return theevent.ReplyString

End Function
```

Notes: Code above is for Mac OS 9!
Also the MBS Plugin has a function for this which may be faster and work also on Macs without Filesharing (which handles this event).

6.0.61   How to automatically enable retina in my apps?

Plugin Version: all, Platform: macOS.

Answer: You can run a build script on each build with this code:
Example:

```
Dim App As String = CurrentBuildLocation + "/" + CurrentBuildAppName + ".app"
Call DoShellCommand("/usr/bin/defaults write " + App + "/Contents/Info ""NSHighResolutionCapable""
YES")
```

Notes: This will set the NSHighResolutionCapable flag to YES.

6.0.62   How to avoid leaks with Cocoa functions?

Plugin Version: all, Platform: macOS.

Answer: You can try this code on Mac OS X:
Example:

```
// in a Timer Action event:
Sub Action()
static LastPool as NSAutoreleasePoolMBS = nil
static CurrentPool as NSAutoreleasePoolMBS = nil

LastPool = CurrentPool
CurrentPool = new NSAutoreleasePoolMBS
```

End Sub

Notes: With Xojo 2009r4 the code above should not be needed as Xojo runtime does automatically handle the NSAutoreleasePools for you. For older Xojo versions you need to use code with a timer with the action event above to avoid memory leaks.

Please do not use Xojo 2009r4 and newer with plugins before version 9.5. You can get crashes there which typically show a line with a objc_msgSend call.

6.0.63 How to avoid trouble connecting to oracle database with SQL Plugin?

Plugin Version: all, Platform: macOS.

Answer: For oracle the most important thing is to point the plugin to the libraries from oracle.
Notes: In environment variables, the paths like ORACLE_HOME must be defined.
On Mac OS X you also need to define DYLD_LIBRARY_PATH to point to the dylib files from oracle.

For that you need to modify /etc/launchd.conf for Mac OS X 10.8 and newer.
In older versions those variables in .MacOSX/environment.plist file in user's home.

Another way for the case you bundle things inside your app is to use the LSEnvironment key in info.plist. In info.plist it looks like this:

<key>LSEnvironment</key>
<dict>
<key>test</key>
<string>Hello World</string>
</dict>

6.0.64 How to avoid ___NSAutoreleaseNoPool console messages in threads?

Plugin Version: all, Platform: macOS.

Answer: You need to use your own NSAutoreleasePool on a thread like this:
Example:

sub MyThread.run
dim pool as new NSAutoreleasePoolMBS
// do work here

pool=nil

end sub

Notes: For more details read here:
http://developer.apple.com/mac/library/documentation/Cocoa/Reference/Foundation/Classes/NSAutorelease-Pool_Class/Reference/Reference.html

6.0.65   How to bring app to front?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: On Mac you can use this code:
Example:

```
// First way:
app.FrontMostMBS = true

// second way:
dim p as new ProcessMBS
p.GetCurrentProcess
p.FrontProcess = true

// third way:
NSApplicationMBS.sharedApplication.activateIgnoringOtherApps(true)

// for Windows:
RemoteControlMBS.WinBringWindowToTop
```

Notes: This will bring a Mac app to the front layer.

6.0.66   How to bring my application to front?

Plugin Version: all, Platform: macOS.

Answer: This makes SimpleText (Code ttxt) to the frontmost application:
Example:

```
Dim A As AppleEvent
A = NewAppleEvent("misc","actv","")
If Not A.Send then
Beep
end if
```

Notes: (Code is Mac only)

6.0.67 How to catch Control-C on Mac or Linux in a console app?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use SignalHandlerMBS class for this.
Example:

```
// watch for Control-C on Mac
call SignalHandlerMBS.SetFlagHandler(2)

dim ende as boolean = false
do
if SignalHandlerMBS.IsFlagSet(2) then
Print "Flag 2 set. Existing..."
ende = true
end if

DoEvents 1
loop until ende
```

Notes: The signal is catched, a flag is set and you can ask later in your normal application flow for the result.

6.0.68 How to change name of application menu?

Plugin Version: all, Platforms: macOS, Windows.

Answer: Use this code to change the application menu name on Mac OS X:
Example:

```
dim mb as new MenubarMBS
dim m as MenuMBS = mb.item(1) // 1 is in my tests the app menu
if m<>Nil then
m.MenuTitle = "Hello World"
end if
```

Notes: This code is for Carbon only.

6.0.69   How to change the name in the menubar of my app on Mac OS X?

Plugin Version: all, Platform: macOS.

Answer:

You mean it screws up if the file name of the bundle itself is different
than the name of the executable file in the MacOS folder within the
bundle? If so, you should find something like this within your
Info.plist file (or the 'plst' resource that the RB IDE builds for you):

<key>CFBundleExecutable</key>
<string>Executable file name here</string>

Just make sure that file name matches.

However, if your question involves how you can change the name of the app
that appears in the menu and the dock, that's different. You can make
this name different from the file name by changing the CFBundleName key:

<key>CFBundleName</key>
<string>Name for menu here</string>

Note that if you use my free AppBundler program, this second part is
taken care of for you – just fill in a custom name in the right field.
You can find AppBundler (from Thomas Reed) at
http://www.bitjuggler.com/products/appbundler/ .

6.0.70   How to check if a folder/directory has subfolders?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use code like this to check all items in a folder:
Example:

```
Function HasSubFolder(folder as FolderItem) As Boolean
dim c as Integer = folder.Count

for i as Integer = 1 to c
dim item as FolderItem = folder.TrueItem(i)

if item<>Nil and item.Directory then
Return true
end if
```

next

End Function

Notes: We use trueitem() here to avoid resolving alias/link files.
Also we check for nil as we may not have permission to see all items.
And if one is a directory, we return without checking the rest.

6.0.71 How to check if Macbook runs on battery or AC power?

Plugin Version: all, Platform: macOS.

Answer: Please use our IOPowerSourcesMBS class like this:
Example:

```
Function PowerSourceState() as Integer
dim p as new IOPowerSourcesMBS

// check all power sources
dim u as Integer = p.Count-1
for i as Integer = 0 to u
dim d as CFDictionaryMBS = p.Item(i)
if d<>nil then
// check if they have a power source state key:
dim o as CFObjectMBS = d.Value(NewCFStringMBS("Power Source State"))
if o isa CFStringMBS then
dim s as string = CFStringMBS(o).str

'MsgBox s

if s = "AC Power" then
Return 1
elseif s = "Battery Power" then
Return 2
end if
end if
end if
next
Return 0 // unknown
End Function
```

Notes: If you want to check the CFDictionaryMBS content, simply use a line like "dim x as dictionary = d.dictionary" and check the contents in the debugger.

6.0.72   How to check if Microsoft Outlook is installed?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: If you need Outlook for Scripting, you should simply check registry for the required Outlook.Application class:
Example:

Function OutlookInstalled() As Boolean
#if TargetWin32 then

try
dim r as new RegistryItem("HKEY_CLASSES_ROOT\Outlook.Application\CLSID", false)

Return true

catch r as RegistryAccessErrorException
// not installed
Return false

end try

#else

// Windows only, so false on other platforms
Return false

#endif

End Function

6.0.73   How to check on Mac OS which country or language is currently selected?

Plugin Version: all, Platform: macOS.

Answer: The code below returns a country value.
Example:

dim result as Integer

IF TargetMacOS THEN

CONST smScriptLang = 28

CONST smSystemScript = -1

DECLARE FUNCTION GetScriptManagerVariable LIB "Carbon" (selector as Integer) as Integer
DECLARE FUNCTION GetScriptVariable LIB "Carbon" (script as Integer, selector as Integer) as Integer

result=GetScriptVariable(smSystemScript, smScriptLang)

END IF

Notes: Returns values like:

For more values, check "Script.h" in the frameworks.

6.0.74 How to code sign my app with plugins?

Plugin Version: all, Platform: macOS.

Answer: When you try to code sign the application with plugin dylibs on Mac OS X, you may see error message that there is actually a signature included.
Notes: Please use the -f command line parameter with codesign utility to overwrite our MBS signature.
We sign our plugins for MacOS, iOS and Windows to make sure they have not been modified.

In terminal, you do like this:

cd <Path to folder of app>

xattr -cr <Appname>.app
codesign -f -s "Developer ID Application: <Your Name>" <Appname>.app/Contents/Frameworks/*.dylib
codesign -f -s "Developer ID Application: <Your Name>" <Appname>.app/Contents/Frameworks/*.framework
codesign -f -s "Developer ID Application: <Your Name>" <Appname>.app

Please use the name of your certificate (See keychain), the name of your app and the path to the app folder.
If you have helper apps you need to sign them first.
You can use a build step to automatically sign your app on build.

6.0.75 How to collapse a window?

Plugin Version: all, Platform: macOS.

Answer: Use this function (Mac only):
Example:

Sub CollapseRBwindow(w as window, CollapseStatus as boolean)
dim state, err as Integer
dim wh as MemoryBlock

Declare Function CollapseWindow Lib "Carbon" (window as Integer,collapse as Integer) as Integer

IF CollapseStatus THEN
state = 1
ELSE
state = 0
END IF

err = CollapseWindow(w.MacWindowPtr, state)

End Sub

Notes: Also the MBS Plugin has a window.collapsedmbs property you can set.
For Windows the MBS Plugin has a window.isiconicmbs property.

6.0.76   How to compare two pictures?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can try this code:
Example:

Function ComparePictures(p as picture,q as picture) as Integer
dim r,u as RGBSurface
dim x,y,n,m,h,w as Integer
dim w1,w2,h1,h2,d1,d2 as Integer
dim c1,c2 as color

h1=p.Height
h2=q.Height
w1=p.Width
w2=q.Width
d1=p.Depth
d2=q.Depth

if d1<>d2 then
Return 1
elseif w1<>w2 then

```
return 2
elseif h1<>h2 then
Return 3
else
r=p.RGBSurface
u=q.RGBSurface

if r=nil or u=nil then
Return -1
else
h=h1-1
w=w1-1
m=min(w,h)

for n=0 to m
c1=r.Pixel(n,n)
c2=u.Pixel(n,n)
if c1<>c2 then
Return 4
end if
next

for y=0 to h
for x=0 to w
c1=r.Pixel(x,y)
c2=u.Pixel(x,y)
if c1<>c2 then
Return 5
end if
next
next

// 0 for equal
// -1 for error (no RGBsurface)
// 1 for different depth
// 2 for different width
// 3 for different height
// 4 for different pixels (fast test)
// 5 for different pixels (slow test)
end if
end if

Exception
Return -1
End Function
```

Notes: Remember that this only works on bitmap pictures, so the picture.BitmapMBS function may be useful.

6.0.77   How to compile PHP library?

Plugin Version: all, Platform: macOS.

Answer: You have to download the source code and compile a static version of the library.
Notes: This instructions were written based on PHP 5.2.6 on Mac OS X:

- Best take a new Mac with current Xcode version installed.

- Download the source code archive. e.g. "php-5.2.6.tar.bz2"

- Expand that archive on your harddisc.

- Open terminal window

- change directory to the php directory. e.g. "cd /php-5.2.6"

- execute this two lines to define the supported CPU types and the minimum Mac OS X version:

- export CFLAGS="-arch ppc -arch i386 -mmacosx-version-min=10.3"

- export CXXFLAGS="-arch ppc -arch i386 -mmacosx-version-min=10.3"

- the command "./configure help" does show the configure options.

- use configure with a line like this:

- ./configure –enable-embed –with-curl -enable-ftp –enable-zip –enable-sockets –enable-static –enable-soap –with-zlib –with-bz2 –enable-exif –enable-bcmath –enable-calendar

- start the compilation with "make all"

- other option is to use "make install" which first does the same as "make all" and than does some installation scripts.

- you may get an error about a duplicate symbole __yytext. Search the file "zend_ini_scanner.c", search a line with "char *yytext;" and change it to "extern char *yytext;".

- On the end you get a lot of error messages, but you have a working library (named libphp5.so) file in the invisible ".libs" folder inside your php source folder.

Possible problems and solutions:

- If the path to your files has spaces, you can get into trouble. e.g. "/RB Plugins/PHP" is bad as files will be searched sometimes in "/RB".

- If you have in /usr/local/lib libraries which conflict with the default libraries, you can get into trouble.

- If you installed some open source tools which compiled their own libraries, you can get into conflicts.

- if you have to reconfigure or after a problem, you may need to use "make clean" before you start "make all" again.

Feel free to install additional libraries and add more packages to the configure line.

6.0.78 How to convert a BrowserType to a String with WebSession.Browser?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use code like this:
Example:

```
Function GetBrowserName(s as WebSession.BrowserType) As string
Select case s
case WebSession.BrowserType.Android
Return "Andriod"
case WebSession.BrowserType.Blackberry
Return "Blackberry"
case WebSession.BrowserType.Chrome
Return "Chrome"
case WebSession.BrowserType.ChromeOS
Return "ChromeOS"
case WebSession.BrowserType.Firefox
Return "Firefox"
case WebSession.BrowserType.InternetExplorer
Return "InternetExplorer"
case WebSession.BrowserType.Opera
Return "Opera"
case WebSession.BrowserType.Safari
Return "Safari"
case WebSession.BrowserType.SafariMobile
Return "SafariMobile"
case WebSession.BrowserType.Unknown
Return "Unknown"
else
Return "Unkown: "+str(integer(s))
end Select

End Function
```

6.0.79   How to convert a EngineType to a String with WebSession.Engine?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use code like this:
Example:

```
Function GetRenderingEngineName(s as WebSession.EngineType) As string
Select case s
case WebSession.EngineType.Gecko
Return "Gecko"
case WebSession.EngineType.Presto
Return "Presto"
case WebSession.EngineType.Trident
Return "Trident"
case WebSession.EngineType.Unknown
Return "Unknown"
case WebSession.EngineType.WebKit
Return "WebKit"
else
Return "Unkown: "+str(integer(s))
end Select


End Function
```

6.0.80   How to convert a PlatformType to a String with WebSession.Platform?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use code like this:
Example:

```
Function GetPlatformName(s as WebSession.PlatformType) As string
Select case s
case WebSession.PlatformType.Blackberry
Return "Blackberry"
case WebSession.PlatformType.iPad
Return "iPad"
case WebSession.PlatformType.iPhone
Return "iPhone"
case WebSession.PlatformType.iPodTouch
Return "iPodTouch"
case WebSession.PlatformType.Linux
Return "Linux"
case WebSession.PlatformType.Macintosh
Return "Macintosh"
```

case WebSession.PlatformType.PS3
Return "PS3"
case WebSession.PlatformType.Unknown
Return "Unknown"
case WebSession.PlatformType.WebOS
Return "WebOS"
case WebSession.PlatformType.Wii
Return "Wii"
case WebSession.PlatformType.Windows
Return "Windows"
else
Return "Unkown: "+str(integer(s))
end Select

End Function

6.0.81 How to convert a text to iso-8859-1 using the TextEncoder?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

This code can help you althrough it's not perfect.
You need to set lc to the current color you use.
Example:

dim outstring as string
dim theMac, thePC as textencoding
dim Mac2PC as textconverter

theMac = getTextEncoding(0) // MacRoman
thePC = getTextEncoding(&h0201) // ISOLatin1

Mac2PC = getTextConverter(theMac, thePC)
// if you wanted to do the opposite just create a converter
// PC2Mac = getTextConverter(thePC, theMac)

outstring = Mac2PC.convert("Bj√rn, this text should be converted")
Mac2PC.clear

Notes:

You have to call Mac2PC.clear after every conversion to reset the encoding engine.
See also newer TextConverterMBS class.

6.0.82   How to convert ChartTime back to Xojo date?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: We have this example code:
Example:

```
Function ChartTimeToDate(ChartTime as Double) As date
static diff as Double = 0.0

if diff = 0.0 then
dim d2 as Double = CDBaseChartMBS.chartTime(2015, 1, 1)
dim da as new date(2015, 1, 1)
dim ts as Double = da.TotalSeconds

diff = ts - d2
end if

dim d as new date
d.TotalSeconds = diff + ChartTime

Return d
End Function
```

Notes: As you see we calculate the difference in base date from Date and ChartTime and later use difference to convert.

6.0.83   How to convert line endings in text files?

Plugin Version: all, Platform: macOS.

Answer: You can simply read file with TextInputStream and write with new line endings using TextOutputStream class.
Example:

```
dim inputfile as FolderItem = SpecialFolder.Desktop.Child("test.txt")
dim outputfile as FolderItem = SpecialFolder.Desktop.Child("output.txt")
dim it as TextInputStream = TextInputStream.Open(inputfile)
dim ot as TextOutputStream = TextOutputStream.Create(outputfile)

ot.Delimiter = EndOfLine.Windows // new line ending
while not it.EOF
ot.WriteLine it.ReadLine
wend
```

Notes: TextInputStream will read any input line endings and with delimiter property in TextOutputStream you can easily define your new delimiter.

6.0.84 How to convert picture to string and back?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use this plugin functions:
Notes: JPEG:

JPEGStringToPictureMBS(buf as string) as picture
JPEGStringToPictureMBS(buf as string,allowdamaged as Boolean) as picture
PictureToJPEGStringMBS(pic as picture,quality as Integer) as string

PNG:

PictureToPNGStringMBS(pic as picture, gamma as single) as string
PictureToPNGStringMBS(pic as picture, mask as picture, gamma as single) as string
PictureToPNGStringMBS(pic as picture, gamma as single, Interlace as Boolean, FilterType as Integer) as string
PictureToPNGStringMBS(pic as picture, mask as picture, gamma as single, Interlace as Boolean, FilterType as Integer) as string
PNGStringToPictureMBS(data as string, gamma as single) as picture
PNGStringToPNGPictureMBS(data as string, gamma as single) as PNGpictureMBS

Tiff:

TIFFStringToPictureMBS(data as string) as picture
TIFFStringToTiffPictureMBS(data as string) as TiffPictureMBS

BMP:

BMPStringtoPictureMBS(data as string) as picture
Picture.BMPDataMBS(ResolutionValueDPI as Integer=72) as string

GIF:

GifStringToGifMBS(data as string) as GIFMBS
GifStringToPictureMBS(data as string) as Picture

6.0.85   How to copy an array?

Plugin Version: all, Platform: macOS.

Answer: You can use a function like this to copy an array:
Example:

Function CopyArray(a() as Double) as Double()
dim r() as Double
for each v as Double in a
r.Append v
next
Return r
End Function

Notes: If needed make several copies of this method with different data types, not just double.
For a deep copy of an array of objects, you need to change code to also make a copy of those objects.

6.0.86   How to copy an dictionary?

Plugin Version: all, Platform: macOS.

Answer: You can use a function like this to copy a dictionary:
Example:

Function CopyDictionary(d as Dictionary) As Dictionary
dim r as new Dictionary
for each key as Variant in d.keys
r.Value(key) = d.Value(key)
next
Return r
End Function

Notes: If needed make several copies of this method with different data types, not just double.
For a deep copy of an dictionary of objects, you need to change code to also make a copy of those objects.

6.0.87   How to copy parts of a movie to another one?

Plugin Version: all, Platforms: macOS, Windows.

Answer: The code below copies ten seconds of the snowman movie to the dummy movie starting at the 5th second.

Example:

dim f as FolderItem
dim md as EditableMovie
dim ms as EditableMovie

f=SpecialFolder.Desktop.Child("Our First Snowman.mov")
ms=f.OpenEditableMovie

ms.SelectionStartMBS=5
ms.SelectionLengthMBS=10

f=SpecialFolder.Desktop.Child("dummy.mov")
md=f.CreateMovie

msgbox str(md.AddMovieSelectionMBS(ms))

Notes: If result is not 0, the method fails.

6.0.88 How to create a birthday like calendar event?

Plugin Version: all, Platform: macOS.

Answer: Try this code:
Example:

// start a connection to the calendar database
dim s as new CalCalendarStoreMBS

// needed for the error details
dim e as NSErrorMBS

dim r as CalRecurrenceRuleMBS = CalRecurrenceRuleMBS.initYearlyRecurrence(1, nil) // repeat every year without end

dim a as new CalAlarmMBS // add alarm
a.action = a.CalAlarmActionDisplay
a.relativeTrigger = -3600*24 // 24 Hours before

// create a new calendar
dim c as new CalEventMBS

dim d as new date(2011, 04, 20) // the date

dim calendars() as CalCalendarMBS = s.calendars

```
// set properties
c.Title="Test Birthday"
c.startDate=d
c.recurrenceRule = r
c.calendar=calendars(0) // add to first calendar
c.addAlarm(a)
c.endDate = d
c.isAllDay = true

// save event
call s.saveEvent(c,s.CalSpanAllEvents, e)
if e<>nil then
MsgBox e.localizedDescription
else
MsgBox "New event was created."
end if
```

Notes: This adds an event to iCal for the given date with alarm to remember you and repeats it every year.

6.0.89   How to create a GUID?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use the UUIDMBS class for this.

6.0.90   How to create a Mac picture clip file?

Plugin Version: all, Platform: Windows.

Answer: You can use code like this one.
Example:

```
dim f As FolderItem
dim p As Picture

f=SpecialFolder.Desktop.Child("Test.pictClipping")
if f=nil then Return

p=new Picture(300,200,32) 'Make a sample picture
p.Graphics.ForeColor=RGB(0,255,255)
p.Graphics.FillOval 0,0,99,99
```

```
p.Graphics.ForeColor=RGB(255,0,0)
p.Graphics.DrawOval 0,0,99,99

dim r As ResourceFork 'ResourceFork is needed for a clip file

// Please define a file type Any
r=f.CreateResourceFork("Any")

// get PICT data using plugin function
dim pictdata as string = p.PicHandleDataMBS
r.AddResource(pictdata,"PICT",256,"Picture")

dim m as new MemoryBlock(8)

m.LittleEndian = false
m.Int16Value(0) = 0
m.Int16Value(2) = 0
m.Int16Value(4) = p.Width
m.Int16Value(6) = p.Height

r.AddResource(m,"RECT",256,"")

'Values taken from a sample file and irrelevant to the problem
dim data as string = DecodeBase64("AQAAAAAAAAAAAAAAAACAFRDRVIAAAABAAAAAAAAAABUQ0lQAAAAA
r.AddResource(data,"drag",128,"") 'ditto
r.Close
```

Notes: In general Apple has deprecated this, but a few application still support clippings.

6.0.91 How to create a PDF file in Xojo?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Check our DynaPDF plugin and the examples.
Notes: An alternative can be to use the CoreGraphics and Cocoa functions on Mac OS X.
For Windows, we can only suggest our DynaPDF plugin.

6.0.92 How to create EmailAttachment for PDF Data in memory?

Plugin Version: all, Platform: macOS.

Answer: You can use code like the one below:
Example:

Function EmailAttachmentFromPDFData(PDFData as string, filename as string) As EmailAttachment
dim a as new EmailAttachment

a.data = EncodeBase64(PDFData, 76)
a.ContentEncoding = "base64"
a.MIMEType = "application/pdf"
a.MacType = "PDF "
a.MacCreator = "prvw"
a.Name = filename

Return a
End Function

Notes: Compared to sample code from Xojo documentation, we set the mime type correct for PDF.
The MacType/MacCreator codes are deprecated, but you can still include them for older Mac email clients.
"prvw" is the creator code for Apple's preview app.

6.0.93 How to create PDF for image files?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use DynaPDF like this:
Example:

Function CreatePrintPDF(jpgFiles() as folderitem, pdfFile as FolderItem, PageWidth as Integer, PageHeight
as Integer) As Boolean
// have files?
If pdfFile = Nil Then Return False
If jpgFiles = Nil Then Return False

If jpgFiles.Ubound <0 Then Return False

// new DynaPDF
Dim pdf As New MyDynapdfMBS

// page width/height in MilliMeter
Dim pdfWidth as Integer = PageWidth * 72 / 25.4
Dim pdfHeight as Integer = PageHeight * 72 / 25.4

// put your license here
Call pdf.SetLicenseKey "Starter"

// create pdf
Call pdf.CreateNewPDF pdfFile

```
// set a couple of options
Call pdf.SetPageCoords(MyDynaPDFMBS.kpcTopDown)
Call pdf.SetResolution(300)
Call pdf.SetUseTransparency(False)
Call pdf.SetSaveNewImageFormat(False)
Call pdf.SetGStateFlags(MyDynaPDFMBS.kgfUseImageColorSpace, False)
Call pdf.SetJPEGQuality(100)

// set page size
Call pdf.SetBBox(MyDynaPDFMBS.kpbMediaBox, 0, 0, pdfWidth, pdfHeight)
Call pdf.SetPageWidth(pdfWidth)
Call pdf.SetPageHeight(pdfHeight)

// append pages with one image per page
For i as Integer = 0 To jpgFiles.Ubound
Call pdf.Append
Call pdf.InsertImageEx(0, 0, pdfWidth, pdfHeight, jpgFiles(i), 1)
Call pdf.EndPage
Next

// close
Call pdf.CloseFile

Return True
End Function
```

Notes: This is to join image files in paper size to a new PDF.
e.g. scans in A4 into an A4 PDF.

6.0.94 How to CURL Options translate to Plugin Calls?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Below a few tips on how to translate command line CURL calls to plugin calls.
Notes: curl -vX PUT http://localhost:5984/appserials/78569238475/DocumentRegister.docx?rev=3-25634563456
–data-binary @DocumentRegister.docx -H "Content-Type: application/msword"

- The option -v means verbose. You can use OptionVerbose and listen for messages in the DebugMessage event.

- The option -X PUT means we want to do a HTTP PUT Request. So set OptionPut to true. Also you will want to set OptionUpload to true as you upload data.

- We have the URL which you put into OptionURL property.

- The –data-binary option tells CURL to pass the given data. With the @ before the data, it is intrepreted as a file name, so the data is read from the given file. You'll need to open this file and pass data with the Read event as needed. (See CURLS ftp file upload example project)

- The last option -H specifies an additional header for the upload. Pas this additional header with the SetOptionHTTPHeader method.

curl -X PUT http://127.0.0.1:5984/appserials/f2f4e540bf8bb60f61cfcd4328001c59 -d ' { "type":"Product","description":"Application Serial","acronym":"AppSerial","dateAdded":"2011-03-21 14:57:36" } '

- Option -X PUT like above.

- Pass the URL again in OptionURL

- This time data is passed in command line for CURL. You'd put this data in the quotes into a string and make it available in the Read event. (See CURLS ftp upload example project)

6.0.95   How to delete file with ftp and curl plugin?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can set post/pre quotes to have ftp commands executed before or after the download/upload.
Example:

dim d as CURLMBS // your curl object

// delete file
dim ws() As String
ws.Append "DELE Temp.txt"

d.SetOptionPostQuote(ws)

Notes: Use SetOptionPostQuote, SetOptionPreQuote or SetOptionQuote.
The ftp commands you pass here are native ftp commands and not the commands you use with ftp applications. To delete use DELE and the file path.

6.0.96   How to detect display resolution changed?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: On Mac OS X simply listen for display changed notifications.
Notes: Use the "Distribution Notification Center.rbp" example project as a base and use it to listen to notifications with the name "O3DeviceChanged".

6.0.97 How to detect retina?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Please use Window.BackingScaleFactorMBS to query the factor.
Example:

msgbox str(window1.BackingScaleFactorMBS)

6.0.98 How to disable force quit?

Plugin Version: all, Platform: macOS.

Answer:

Please visit this website and get the control panel for Mac OS 9 there:
http://www3.sk.sympatico.ca/tinyjohn/DFQ.html

For Mac OS X use the MBS Plugin with the SetSystemUIModeMBS method.
Notes:

Please use presentationOptions in NSApplicationMBS for Cocoa applications.

6.0.99 How to disable the error dialogs from Internet Explorer on javascript errors?

Plugin Version: all, Platform: Windows.

Answer: You can use this code in the htmlviewer open event:
Example:

if targetwin32 then
htmlviewer1._ole.Content.value("Silent") = True
end if

Notes: This disables the error dialogs from Internet Explorer.

6.0.100 How to display a PDF file in Xojo?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: On Mac OS X you can use CoreGraphics or PDFKit to display a PDF.

Notes: An alternative can be to load the PDF into a htmlviewer so the PDF plugin can display it.

On Windows you may need to use the Acrobat ActiveX control from Adobe or launch Acrobat Reader.

6.0.101   How to do a lottery in RB?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Try this function:

Example:

```
Sub Lotto(max as Integer,count as Integer,z() as Integer)
// Lotto count numbers of max put into the array z beginning at index 0
dim n(0) as Integer ' all the numbers
dim m as Integer ' the highest field in the current array
dim i,a,b,d as Integer ' working variables

'fill the array with the numbers
m=max-1
redim n(m)

for i=0 to m
n(i)=i+1
next

' unsort them by exchanging random ones
m=max*10
for i=1 to m
a=rnd*max
b=rnd*max

d=n(a)
n(a)=n(b)
n(b)=d
next

' get the first count to the dest array
m=count-1
redim z(m)
for i=0 to m
z(i)=n(i)
next

'sort the result
z.sort
End Sub
```

```
Sub Open()
// Test it

dim za(0) as Integer ' the array of the numbers

lotto 49,6,za ' 6 of 49 in Germany


' and display them
staticText1.text=str(za(0))+chr(13)+str(za(1))+chr(13)+str(za(2))+chr(13)+str(za(3))+chr(13)+str(za(4))+chr(13)+str(za
End Sub
```

6.0.102 How to do an asycron DNS lookup?

Plugin Version: all, Platform: Windows.

Answer: use CFHostMBS class (Mac OS X only).
Notes: Xojo internal functions and plugin DNS functions are sycronized.
You can use DNSLookupThreadMBS class for doing them asyncron.

6.0.103 How to draw a dushed pattern line?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can try this code:
Example:

```
// call like this: DrawDushedPatternLine g,0,0,width,height,10

Sub DrawDushedPatternLine(g as graphics,x1 as Integer,y1 as Integer,x2 as Integer,y2 as Integer, partlen
as Integer)
dim x,y,ox,oy as Double
dim dx,dy as Double
dim w,h,d as Double
dim b as Boolean

w=x2-x1
h=y2-y1

d=sqrt(w*w+h*h)

dx=w/d*partlen
dy=h/d*partlen
```

```
b=true
x=x1
while (x<x2) and (y<y2)
ox=x
oy=y

x=x+dx
y=y+dy

if b then
g.DrawLine ox,oy,x,y
end if

b=not b
wend


End Sub
```

Notes: It would be possible to add this to the plugin, but I think it's better if you do it in plain Xojo code, so it even works on Windows.

6.0.104   How to draw a nice antialiased line?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

This code can help you althrough it's not perfect.
You need to set lc to the current color you use.
Example:

```
Sub drawLine(xs as Integer, ys as Integer, xe as Integer, ye as Integer, face as RGBSurface, lineColor as
color)
dim intX, intY, count, n, xDiff, yDiff as Integer
dim v, v1, floatX, floatY, xx, yy, xStep, yStep as Double
dim c as color

const st=1.0

xDiff=xe-xs
yDiff=ye-ys
count=max(abs(xDiff), abs(yDiff))
xStep=xDiff/count
yStep=yDiff/count
```

xx=xs
yy=ys
for n=1 to count
intX=xx
intY=yy
floatX=xx-intX
floatY=yy-intY

v=(1-floatX)*(1-floatY)*st
v1=1-v
c=face.pixel(intX, intY)
face.pixel(intX, intY)=rgb(v*lineColor.red+v1*c.red, v*lineColor.green+v1*c.green, v*lineColor.blue+v1*c.blue)
v=floatX*(1-floatY)*st
v1=1-v
c=face.pixel(intX+1, intY)
face.pixel(intX+1, intY)=rgb(v*lineColor.red+v1*c.red, v*lineColor.green+v1*c.green, v*lineColor.blue+v1*c.blue)
v=(1-floatX)*floatY*st
v1=1-v
c=face.pixel(intX, intY+1)
face.pixel(intX, intY+1)=rgb(v*lineColor.red+v1*c.red, v*lineColor.green+v1*c.green, v*lineColor.blue+v1*c.blue)
v=floatX*floatY*st
v1=1-v
c=face.pixel(intX+1, intY+1)
face.pixel(intX+1, intY+1)=rgb(v*lineColor.red+v1*c.red, v*lineColor.green+v1*c.green, v*lineColor.blue+v1*c.blue)

xx=xx+xStep
yy=yy+yStep
next

End Sub

Notes:

PS: st should be 1 and face should be a RGBSurface or a Graphics object.

6.0.105 How to dump java class interface?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: In terminal you can use "javap -s <classname>" to display the class with the method names and parameters.
Notes: For example show ResultSet class: javap -s java.sql.ResultSet

6.0.106   How to duplicate a picture with mask or alpha channel?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use code like this function:
Example:

```
Function Duplicate(extends p as Picture) As Picture
#if RBVersion >= 2011.04 then
if p.HasAlphaChannel then

// create nw picture and copy content:
dim q as new Picture(p.Width, p.Height)
q.Graphics.DrawPicture p,0,0

Return q

end if
#endif

// create new picture
dim q as new Picture(p.Width, p.Height, 32)

// get mask
dim oldMask as Picture = p.mask(false)
if oldMask = nil then
// no mask, so simple copy
q.Graphics.DrawPicture p,0,0
Return q
end if

// remove mask
p.mask = nil

// copy picture and mask
q.Graphics.DrawPicture p, 0, 0
q.mask.Graphics.DrawPicture oldMask,0,0

// restore mask
p.mask = oldmask

Return q
End Function
```

Notes: Simply copy it to a module and call it like this: q = p.duplicate.
The code above works with old Xojo versions because of the #if even if your RS version does not support
alpha channel pictures. This way it's future proof.

6.0.107 How to enable assistive devices?

Plugin Version: all, Platform: macOS.

Answer: You can use AppleScript code like below:
Notes: tell application "System Events"
activate

set UI elements enabled to true

return UI elements enabled
end tell

You can run this with AppleScriptMBS class.

6.0.108 How to encrypt a file with Blowfish?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use code like this:
Example:

```
dim fi as FolderItem = SpecialFolder.Desktop.Child("test.xojo_binary_project")
dim fo as FolderItem = SpecialFolder.Desktop.Child("test.encrypted")

// read input
dim bi as BinaryStream = BinaryStream.Open(fi)
dim si as string = bi.Read(bi.Length)
bi.Close

// encrypt
dim so as string = BlowfishMBS.Encrypt("MyKey",si)

// write output
dim bo as BinaryStream = BinaryStream.Create(fo)
bo.Write so
bo.Close
```

Notes: Of course you can decrypt same way, just use Decrypt function and of course swap files.

6.0.109   How to extract text from HTML?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use both RemoveHTMLTagsMBS and DecodingFromHTMLMBS like this:
Example:

```
dim html as string = "<p><B>Gr&uuml;&szlig;e</B></P>"
dim htmltext as string = RemoveHTMLTagsMBS(html)
dim text as string = DecodingFromHTMLMBS(htmltext)

MsgBox text // shows: Gr√º√üe
```

Notes: You can use it together with RemoveHTMLTagsMBS to remove html tags. What you get will be the text without tags.
DecodingFromHTMLMBS turns HTML escapes back to unicode characters. Like ä to √§.

6.0.110   How to find empty folders in a folder?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Try this code:
Example:

```
dim folder as folderitem // your folder

dim c as Integer = folder.count
for i as Integer = 1 to c
dim item as folderitem = folder.trueitem(i)
if item = nil then
// ignore
elseif item.directory then
// folder
if item.count = 0 then
// found empty folder
end if
end if
next
```

6.0.111   How to find iTunes on a Mac OS X machine fast?

Plugin Version: all, Platform: macOS.

Answer: You can try Launch Services.
Example:

dim f as FolderItem

f=LaunchServicesFindApplicationForInfoMBS("hook","com.apple.iTunes","iTunes.app")

MsgBox f.NativePath

6.0.112   How to find network interface for a socket by it's name?

Plugin Version: all, Platform: macOS.

Answer: You can use our plugin to build a lookup table.
Example:

Function FindNetworkInterface(name as string) As NetworkInterface
name = name.trim

if name.len = 0 then Return nil

// search by IP/MAC
dim u as Integer = System.NetworkInterfaceCount-1
for i as Integer = 0 to u
dim n as NetworkInterface = System.GetNetworkInterface(i)
if n.IPAddress = name or n.MACAddress = name then
Return n
end if
next

// use MBS Plugin to build a mapping
dim interfaces() as NetworkInterfaceMBS = NetworkInterfaceMBS.AllInterfaces
dim map as new Dictionary

for each n as NetworkInterfaceMBS in interfaces
dim IPv4s() as string = n.IPv4s
dim IPv6s() as string = n.IPv6s

for each IPv4 as string in IPv4s
map.Value(IPv4) = n.Name
next
for each IPv6 as string in IPv6s
map.Value(IPv6) = n.Name
next
if n.MAC<>"" then
map.Value(n.MAC) = n.Name

```
end if
next


// now search interfaces by name, IPv4 or IPv6
for i as Integer = 0 to u
dim n as NetworkInterface = System.GetNetworkInterface(i)
if map.Lookup(n.IPAddress, "") = name then
Return n
end if

if map.Lookup(n.MACAddress, "") = name then
Return n
end if
next


End Function
```

Notes: The code above uses a lookup table build using NetworkInterfaceMBS class to find the network interface by name.

6.0.113   How to find version of Microsoft Word?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use code like this:
Example:

```
// find Word
dim f as FolderItem = LaunchServicesFindApplicationForInfoMBS("","com.microsoft.Word","")

// open bundle
dim c as new NSBundleMBS(f)

// read info
dim d as Dictionary = c.infoDictionary

// show version
MsgBox d.Lookup("CFBundleVersion","")
```

Notes: Older versions of Word can be found with creator code "MSWD".

6.0.114   How to fix CURL error 60/53 on connecting to server?

Plugin Version: all, Platform: macOS.

Answer: You probably connect with SSL and you have no valid certificate.
Example:

```
dim d as new CURLSMBS

// Disable SSL verification
d.OptionSSLVerifyHost = 0 // don't verify server
d.OptionSSLVerifyPeer = 0 // don't proofs certificate is authentic

// With SSL Verification:
dim cacert as FolderItem = Getfolderitem("cacert.pem")
d.OptionCAInfo = cacert.NativePath
d.OptionSSLVerifyHost = 2 // verify server
d.OptionSSLVerifyPeer = 1 // proofs certificate is authentic
```

Notes: You can either use the code above to disable the SSL verification and have no security.
Or you use the cacert file and enable the verification. Than you only get a connection if the server has a valid certificate.

see also:
http://curl.haxx.se/ca/

6.0.115   How to format double with n digits?

Plugin Version: all, Platform: macOS.

Answer: You can use the FormatMBS function for this.
Example:

```
dim d as Double = 123.4567890
listbox1.AddRow FormatMBS("%f", d)
listbox1.AddRow FormatMBS("%e", d)
listbox1.AddRow FormatMBS("%g", d)

listbox1.AddRow FormatMBS("%5.5f", d)
listbox1.AddRow FormatMBS("%5.5e", d)
listbox1.AddRow FormatMBS("%5.5g", d)

d = 0.000000123456
listbox1.AddRow FormatMBS("%f", d)
listbox1.AddRow FormatMBS("%e", d)
```

listbox1.AddRow FormatMBS(”%g”, d)

listbox1.AddRow FormatMBS(”%5.5f”, d)
listbox1.AddRow FormatMBS(”%5.5e”, d)
listbox1.AddRow FormatMBS(”%5.5g”, d)

Notes: see FormatMBS for details.
In general %f is normal style, %e is scientific and %g is whichever gives best result for given space.

6.0.116   How to get a time converted to user time zone in a web app?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use the WebSession.GMTOffset property.
Example:

```
Sub Open()
// current date on server
dim d as new date
dim s as string = d.LongTime

// adjust to client GMT offset
d.GMTOffset = d.GMTOffset + Session.GMTOffset

dim t as string = D.LongTime

MsgBox s+EndOfLine+t
End Sub
```

6.0.117   How to get an handle to the frontmost window on Windows?

Plugin Version: all, Platform: Windows.

Answer: This function returns a handle for the frontmost window:
Example:

```
Function GetForegroundWindowHandle() as Integer
#if targetwin32 then
declare function GetForegroundWindow Lib ”user32.dll” as Integer
Return GetForegroundWindow()
#endif
End Function
```

6.0.118 How to get CFAbsoluteTime from date?

Plugin Version: all, Platforms: macOS, Windows.

Answer: Use code like this:
Example:

```
dim d as new date
dim t as CFTimeZoneMBS = SystemCFTimeZoneMBS
dim g as new CFGregorianDateMBS
g.Day = d.Day
g.Month = d.Month
g.Year = d.Year
g.Minute = d.Minute
g.Hour = d.Hour
g.Second = d.Second

dim at as CFAbsoluteTimeMBS = g.AbsoluteTime(t)
dim x as Double = at.Value

MsgBox str(x)
```

Notes: As you see we need a timezone and put the date values in a gregorian date record. Now we can query absolute time for the given timezone.

6.0.119 How to get client IP address on web app?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use the WebSession.RemoteAddress property.
Example:

```
Sub Open()
Title = Session.RemoteAddress
End Sub
```

6.0.120 How to get fonts to load in charts on Linux?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Please use the SetFontSearchPath method in the CDBaseChartMBS class to specify where your fonts are.

Example:

if TargetLinux then
CDBaseChartMBS.SetFontSearchPath "/usr/share/fonts/truetype;/usr/share/fonts/truetype/msttcorefonts"
else
// on Mac and Windows we use system fonts.
end if

// also you can later switch default fonts:

dim Chart as CDBaseChartMBS // your chart

#If TargetARM And TargetLinux Then
// use specific fonts on Linux on Raspberry Pi
Call Chart.setDefaultFonts("/usr/share/fonts/truetype/piboto/PibotoLt-Regular.ttf","/usr/share/fonts/truetype/piboto/Pi
#EndIf

Notes: On macOS, iOS and Windows, the fonts are loaded from the system's font folder.

e.g. if you use ubuntu, you can install the ttf-mscorefonts-installer package and call this method with "/usr/share/fonts/truetype/msttcorefonts" as the path. No backslash on the end of a path, please.

6.0.121   How to get fonts to load in DynaPDF on Linux?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Please use the AddFontSearchPath method in the DynaPDFMBS class to specify where your fonts are.

Example:

dim d as new DynaPDFMBS
if TargetLinux then
call d.AddFontSearchPath "/usr/share/fonts/truetype", true
else
// on Mac and Windows we use system fonts.
end if

Notes: On Mac OS X and Windows, the fonts are loaded from the system's font folder.

e.g. if you use ubuntu, you can install the ttf-mscorefonts-installer package and call this method with "/usr/share/fonts/truetype/msttcorefonts" as the path. No backslash on the end of a path, please.

6.0.122 How to get GMT time and back?

Plugin Version: all, Platform: macOS.

Answer: You can use the date class and the GMTOffset property.
Example:

```
// now
dim d as new date

// now in GMT
dim e as new date
e.GMTOffset = 0

// show
MsgBox str(d.TotalSeconds,"0.0")+" "+str(e.TotalSeconds, "0.0")

dim GMTTimeStamp as Double = e.TotalSeconds

// restore
dim f as new date

// add GMT offset here
f.TotalSeconds = GMTTimeStamp + f.GMTOffset*3600
// because here it's removed
f.GMTOffset = f.GMTOffset

MsgBox d.ShortTime+" ("+str(d.GMTOffset)+") "+str(d.TotalSeconds,"0.0")+EndOfLine+_
e.ShortTime+" ("+str(e.GMTOffset)+") "+str(e.TotalSeconds,"0.0")+EndOfLine+_
f.ShortTime+" ("+str(f.GMTOffset)+") "+str(f.TotalSeconds,"0.0")
```

Notes: It's sometimes a bit tricky with the date class as setting one property often changes the others.

6.0.123 How to get good crash reports?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Check this website from the webkit website:
Notes: http://webkit.org/quality/crashlogs.html

6.0.124   How to get list of all threads?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use the runtime module like in this function:
Example:

```
Function Threads() As Thread()
#pragma DisableBackgroundTasks
dim t() as Thread

Dim o as Runtime.ObjectIterator=Runtime.IterateObjects
While o.MoveNext
if o.Current isa Thread then
t.Append thread(o.current)
end if
Wend

Return t
End Function
```

Notes: This returns an array of all thread objects currently in memory.
The pragma is important here as it avoids thread switches which may cause a thread to be created or deleted.

6.0.125   How to get parameters from webpage URL in Xojo Web Edition?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use the Webpage.ParametersReceived event.
Example:

```
Sub ParametersReceived(Variables As Dictionary)
for each key as Variant in Variables.keys
MsgBox key+" ->"+Variables.Value(key)
next
End Sub
```

Notes: The text encodings of this strings is not defined in Xojo 2010r5. Please use DefineEncoding.

6.0.126   How to get the color for disabled textcolor?

Plugin Version: all, Platform: macOS.

Answer: Ask the appearance manager:
Example:

Function GetThemeTextColor(inColor as Integer, inDepth as Integer, inColorDev as Boolean) As Color
declare function GetThemeTextColor lib "Carbon" (inColor as Integer, inDepth as Integer, inColorDev as Boolean, outColor as Ptr) as Integer

dim i as Integer
dim col as MemoryBlock

col = newMemoryBlock(6)

i = GetThemeTextColor(inColor, inDepth, inColorDev, col)

return RGB(col.UShort(0)\256, col.UShort(2)\256, col.UShort(4)\256)
End Function

Notes: The color for this is:

const kThemeTextColorDialogInactive = 2.

c = GetThemeTextColor(kThemeTextColorDialogInactive, Screen(0).Depth, true)

For Mac OS X you should use "CarbonLib" instead of "AppearanceLib" ...

6.0.127   How to get the current free stack space?

Plugin Version: all, Platform: macOS.

Answer: You can something like the code below:
Example:

Sub ShowStackSize()
dim threadid as Integer
dim size as Integer

declare function GetCurrentThread lib "Carbon" (byref threadid as Integer) as short
declare function ThreadCurrentStackSpace lib "Carbon" (threadid as Integer, byref size as Integer) as short

if GetCurrentThread(threadid)=0 then
if 0=ThreadCurrentStackSpace(threadid,size) then
MsgBox str(size)
end if
end if

End Sub

Notes: For Mac OS 9, use "ThreadLib" instead of "CarbonLib". You can use #if if you like for that.

6.0.128   How to get the current timezone?

Plugin Version: all, Platforms: macOS, Windows.

Answer:

You can use the TimeZoneMBS class or the CFTimeZoneMBS class.
Or code like below:
Example:

```
Function GMTOffsetInMinutes() as Integer
// Returns the offset of the current time to GMT in minutes.
// supports Mac OS and Windows, but not Linux yet (let me know if
// you have code for that, please)
//
// Note that the offset is not always an even multiple of 60, but
// there are also half hour offsets, even one 5:45h offset

// This version by Thomas Tempelmann (rb@tempel.org) on 25 Nov 2005
// with a fix that should also make it work with future Intel Mac targets.
//
// Using code from various authors found on the RB NUG mailing list

dim result, bias, dayLightbias as Integer
dim info as memoryBlock
dim offset as Integer

#if targetMacOS then

Declare Sub ReadLocation lib "Carbon" (location As ptr)

info = NewMemoryBlock(12)
ReadLocation info
if false then
// bad, because it does not work on Intel Macs:
'offset = info.short(9) * 256 + info.byte(11)
else
offset = BitwiseAnd (info.long(8), &hFFFFFF)
end

offset = info.short(9) * 256 + info.byte(11)
```

```
offset = offset \60
return offset

#endif

#if targetWin32 then

Declare Function GetTimeZoneInformation Lib "Kernel32" ( tzInfoPointer as Ptr ) as Integer
// returns one of
// TIME_ZONE_ID_UNKNOWN 0
// – Note: e.g. New Delhi (GMT+5:30) and Newfoundland (-3:30) return this value 0
// TIME_ZONE_ID_STANDARD 1
// TIME_ZONE_ID_DAYLIGHT 2

info = new MemoryBlock(172)
result = GetTimeZoneInformation(info)

bias = info.Long(0)
// note: the original code I found in the NUG archives used Long(84) and switched to Long(0)
// only for result=1 and result=2, but my tests found that Long(0) is also the right value for result=0

if result = 2 then
daylightBias = info.long(168)
end if
offset = - (bias + dayLightbias)
return offset

#endif

End Function
```

6.0.129 How to get the current window title?

Plugin Version: all, Platform: macOS.

Answer: The code below returns the current window title for the frontmost window on Mac OS X if Accessibilty services are
Example:

```
Function CurrentWindowTitle() As string
// your application needs permissions for accessibility to make this work!

dim SystemWideElement,FocusedApplicationElement,FocusedWindowElement as AXUIElementMBS
dim FocusedApplication,FocusedWindow,Title as AXValueMBS
dim s as String
dim cs as CFStringMBS
```

SystemWideElement=AccessibilityMBS.SystemWideAXUIElement
if SystemWideElement<>nil then
FocusedApplication=SystemWideElement.AttributeValue(AccessibilityMBS.kAXFocusedApplicationAttribute)
if FocusedApplication.Type=AccessibilityMBS.kAXUIElementMBSTypeID then
FocusedApplicationElement=new AXUIElementMBS
FocusedApplicationElement.Handle=FocusedApplication.Handle
FocusedApplicationElement.RetainObject

FocusedWindow=FocusedApplicationElement.AttributeValue(AccessibilityMBS.kAXFocusedWindowAttribute)

if FocusedWindow<>nil and AccessibilityMBS.kAXUIElementMBSTypeID=FocusedWindow.Type then

FocusedWindowElement=new AXUIElementMBS
FocusedWindowElement.Handle=FocusedWindow.Handle
FocusedWindowElement.RetainObject

Title=FocusedWindowElement.AttributeValue(AccessibilityMBS.kAXTitleAttribute)
if Title<>nil and Title.Type=kCFStringMBSTypeID then
cs=new CFStringMBS
cs.handle=Title.Handle
cs.RetainObject
Return cs.str
end if
end if
end if
end if
End Function

6.0.130   How to get the cursor blink interval time?

Plugin Version: all, Platform: macOS.

Answer: On Mac OS you can use GetCaretTime from the toolbox.
Example:

declare function GetCaretTime lib "Carbon" () as Integer

MsgBox str(GetCaretTime())+" ticks"

Notes: 60 ticks make one second.

6.0.131 How to get the list of the current selected files in the Finder?

Plugin Version: all, Platform: macOS.

Answer:

Use the AppleScript like this one:

```
tell application "finder"
return selection
end tell
```

Which translates into this AppleEvent:

Process("Finder").SendAE "core,getd,'—-':obj { form:prop, want:type(prop), seld:type(sele), from:'null'() }
"

and as Xojo code it looks like this:
Example:

```
dim ae as appleevent
dim o1 as appleeventObjectSpecifier
dim f as folderItem
dim aList as appleeventdescList
dim i as Integer
dim dateiname as string

// setup the AppleEvent
o1=getpropertyObjectDescriptor( nil, "sele")
ae= newappleEvent("core", "getd", "MACS")
ae.objectSpecifierParam("—-")=o1

// send it
if ae.send then
// got the list
alist=ae.replyDescList

// now show the list of filename into an editfield:

for i=1 to alist.count
f=alist.folderItemItem(i)

dateiname=f.name
// editfield1 with property "mulitline=true"!
editfield1.text=editfield1.text + dateiname + chr(13)
next
```

end if

6.0.132   How to get the Mac OS system version?

Plugin Version: all, Platform: macOS.

Answer: The following code queries the value and displays the version number:
Example:

```
dim first as Integer
dim second as Integer
dim third as Integer
dim l as Integer

if System.Gestalt("sysv",l) then

Third=Bitwiseand(l,15)
second=Bitwiseand(l\16,15)
first=Bitwiseand(l\256,15)+10*Bitwiseand(l\256\16,15)
end if

if First>=10 then
msgbox "Mac OS X "+str(First)+"."+str(Second)+"."+str(third)
else
msgbox "Mac OS "+str(First)+"."+str(Second)+"."+str(third)
end if
```

6.0.133   How to get the Mac OS Version using System.Gestalt?

Plugin Version: all, Platform: macOS.

Answer: Try this code:
Example:

```
Dim s As String
Dim b As Boolean
Dim i, resp as Integer

// Systemversion
b = System.Gestalt("sysv", resp)
If b then
s = Hex(resp)
```

```
For i =Len(s)-1 DownTo 1
s=Left(s,i)+"."+Mid(s,i+1)
Next
MsgBox "Systemversion: Mac OS " + s
end if
```

Notes: The MBS Plugin has a SystemInformationMBS.OSVersionString function for this.

6.0.134   How to get the screensize excluding the task bar?

Plugin Version: all, Platform: Windows.

Answer: Try this code:
Notes: Use the Screen class with the available* properties.

6.0.135   How to get the size of the frontmost window on Windows?

Plugin Version: all, Platform: Windows.

Answer: Try this code:
Notes: Make yourself a class for the WindowRect with four properties:

```
Bottom as Integer
Left as Integer
Right as Integer
Top as Integer
```

Add the following method to your class:

```
Sub GetWindowRect(windowhandle as Integer)
dim err as Integer
dim mem as memoryBlock
#if targetwin32 then
Declare Function GetWindowRect Lib "user32.dll" (hwnd as Integer, ipRect As Ptr) as Integer

mem = newmemoryBlock(16)
err = GetWindowRect(windowhandle, mem)
Left = mem.long(0)
Top = mem.Long(4)
Right = mem.Long(8)
Bottom = mem.Long(12)
```

#endif
End Sub

Good to use for the MDI Master Window!

6.0.136   How to get the source code of a HTMLViewer?

Plugin Version: all, Platform: macOS.

Answer: Try this code:
Example:

// for Windows:

msgbox HTMLViewer1.IEHTMLTextMBS

// for MacOS with WebKit 2.x:

msgbox HTMLViewer1.WKWebViewMBS.HTMLText

6.0.137   How to get Xojo apps running Linux?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You need to install some requuire packages.
Notes: You need CUPS as well as GTK packages. On 64 bit systems also the ia32-libs package.

Please note that you need a x86 compatible Linux. So no PPC, Power, ARM or other CPUs.

6.0.138   How to handle really huge images with GraphicsMagick or ImageMagick?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Sometimes it may be better to use an extra application to process images.
Notes: A typical 32 bit app made with Xojo can use around 1.8 GB on Windows and 3 GB on Mac OS X. Some images may be huge, so that processing them causes several copies of the image to be in memory. With a 500 MB image in memory, doing a scale or rotation may require a temp image. So with source, temp and dest images with each 500 MB plus your normal app memory usage, you may hit the limit of Windows with 1.8 GB.

In that case it may be worth running a tool like gm in the shell class. gm is the command line version of GraphicsMagick. There you can run the 64 bit version which is not limited in memory like your own application. Also you can monitor progress and keep your app responsive.

6.0.139 How to handle tab key for editable cells in listbox?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use code like this function:
Example:

```
Function HandleTabInList(list as listbox, row as Integer, column as Integer, key as String) As Boolean
// Handle tab character in Listbox.CellKeyDown event

Select case asc(key)
case 9
if Keyboard.AsyncShiftKey then
// back

// look for column left
for i as Integer = column-1 downto 0
if list.ColumnType(i) >= list.TypeEditable then
list.EditCell(row, i)
Return true
end if
next

// not found, so look in row before
row = row - 1
if row >= 0 then
for i as Integer = list.ColumnCount-1 downto 0
if list.ColumnType(i) >= list.TypeEditable then
list.EditCell(row, i)
Return true
end if
next
end if
else
// forward

// look for column right
for i as Integer = column+1 to list.ColumnCount-1
if list.ColumnType(i) >= list.TypeEditable then
list.EditCell(row, i)
Return true
end if
next
```

```
// not found, so look in row below
row = row + 1
if row <list.ListCount then
for i as Integer = 0 to list.ColumnCount-1
if list.ColumnType(i) >= list.TypeEditable then
list.EditCell(row, i)
Return true
end if
next
end if
end if
end Select
End Function
```

Notes: You call it from CellKeyDown event like this:

```
EventHandler Function CellKeyDown(row as Integer, column as Integer, key as String) As Boolean
if HandleTabInList(me, row, column, key) then Return true
End EventHandler
```

As you see in the code, we handle tab and shift + tab for moving back and forward. Also we wrap to previous/next row if needed. Feel free to extend this to wrap from last to first row or create a new row for editing.

6.0.140 How to hard link MapKit framework?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Our MapKit classes weak link the framework. If you need hard linking it for the App Store, you can add this method to a class:
Example:

```
Sub ReferenceMapKit()
// just put this in window or app class

#if TargetMachO and Target64Bit then
Declare sub testing Lib "MapKit" Selector "test" (id as ptr)
testing(nil)
#endif

End Sub
```

Notes: No need to call the method.
Just having it in a window or app, will cause the compiler to hard link the framework.

6.0.141 How to have a PDF downloaded to the user in a web application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use a WebHTMLViewer control and load the PDF file with the PDF plugin from the browser.
Example:

```
dim CurrentFile as WebFile // a property of the WebPage

// define the PDF file
CurrentFile = new WebFile
CurrentFile.Filename = "test.pdf"
CurrentFile.MIMEType = "application/pdf"
CurrentFile.Data = "some pdf data" // MyDynaPDF.GetBuffer
CurrentFile.ForceDownload = true

// start the download
showurl(CurrentFile.url)
```

Notes: See our Create PDF example for the Xojo Web Edition.

6.0.142 How to hide all applications except mine?

Platform: macOS.

Answer: The code below will on Mac OS hide all applications except your one:
Example:

```
dim p as new ProcessMBS

p.GetFirstProcess
do
if not p.FrontProcess then
p.Visible=false
end if
loop until not p.GetNextProcess
```

6.0.143 How to hide script errors in HTMLViewer on Windows?

Plugin Version: all, Platform: Windows.

Answer: Set Internet Explorer to silent mode with code like this:
Example:

htmlviewer1._ole.Content.value("Silent") = True

Notes: Simply put this code in the open event of your htmlviewer control (using me instead of htmlviewer1).

6.0.144 How to hide the grid/background/border in ChartDirector?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: If you want to hide something in a chart, simply assign the kTransparent constant as color.

6.0.145 How to hide the mouse cursor on Mac?

Plugin Version: all, Platform: macOS.

Answer: Try this declare:
Example:

Declare Sub HideCursor Lib "Carbon" () Inline68K("A852")

HideCursor

Notes: The MBS Plugin has this function and supports it on Windows, too.

6.0.146 How to insert image to NSTextView or TextArea?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: With NSTextViewMBS you can use this code to insert file:
Example:

// insert a file to textview

Public Sub InsertFile(textview as NSTextViewMBS, f as FolderItem)
// read to file

```
dim b as BinaryStream = BinaryStream.Open(f)
dim s as string = b.Read(b.Length)

// build wrapper
dim fileWrapper as NSFileWrapperMBS = NSFileWrapperMBS.initRegularFileWithContents(s)
fileWrapper.preferredFilename = f.name

// make attachment
dim fileAttachment as new NSTextAttachmentMBS(fileWrapper)
dim attributedString as NSAttributedStringMBS = NSAttributedStringMBS.attributedStringWithAttach-
ment(fileAttachment)

// add to a NSTextViewMBS
textview.insertText attributedString

End Sub
```

Notes: For TextArea you can query the underlaying NSTextViewMBS object via TextArea.NSTextViewMBS method.

6.0.147 How to jump to an anchor in a htmlviewer?

Plugin Version: all, Platforms: macOS, Windows.

Answer: You can use javascript to change the current window's location.
Example:

```
// load website
htmlviewer1.LoadURL "http://www.monkeybreadsoftware.net/addressbook-abpersonmbs.shtml"

// later jump to anchor named "16":

if TargetWin32 then
call HTMLViewer1.IERunJavaScriptMBS "window.location = ""#16"""
end if
```

6.0.148 How to keep a movieplayer unclickable?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: To keep the user away from clicking on a playing Movie you can just drop a Canvas in front of the Movieplayer and take the clicks there.
Example:

```
Function Canvas1.MouseDown(X as Integer, Y as Integer) as boolean
return true // take it and do nothing
End Function
```

6.0.149 How to keep my web app from using 100% CPU time?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: On Linux and MacOS you can use renice command in the terminal. On Windows use the task manager to reduce priority.

Notes: If you launch your app with nohup on Linux or Mac OS X like this from the terminal or a script:

nohup /webapps/MyApp/MyApp &

you can simply have a second line saying this:

renice 20 $!

which tells the system to lower priority to lowest value for the latest background process.

6.0.150 How to kill a process by name?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can kill a process (or application) by name if you loop over all the processes and kill the one you need.

Example:

```
dim p as new ProcessMBS
p.GetfirstProcess ' get first
do
if p.name = "TextEdit" then
call p.KillProcess
Return
end if
loop until not p.GetNextProcess
```

Notes: You may want to check the result of killProcess function. Not every user is allowed to kill every application.

6.0.151 How to know how many CPUs are present?

Plugin Version: all, Platform: macOS.

Answer: Try this function:
Example:

```
Function GetCPUCount() as Integer
Declare Function MPProcessors Lib "Carbon" () as Integer

Return MPProcessors()
End Function
```

Notes: Your app will than need that library to launch on Classic. To avoid this the MBS plugin checks if this library is available and return 1 if it's not available.

6.0.152 How to know the calling function?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: On Mac you can use a helper function like this this code:
Example:

```
Public Function CallingFunction() as string
// Query name of calling function of a function

#Pragma BreakOnExceptions false

try

// raise a dummy exception
dim r as new NilObjectException
raise r

catch x as NilObjectException

// get stack
dim stack() as string = x.Stack

// pick function name and return
dim name as string = stack(2)
Return name

end try
End Function
```

Notes: You need to include function names in your application.

6.0.153   How to launch an app using it's creator code?

Plugin Version: all, Platform: macOS.

Answer: Send an AppleEvent "oapp" with the creator code to the Finder ("MACS"):
Example:

```
Dim a as AppleEvent
dim creator as string

creator = "MSIE" ' here the Internet Explorer

a = NewAppleEvent("aevt", "odoc", "MACS")
a.Timeout = -1

a.ObjectSpecifierParam("—-") = GetUniqueIDObjectDescriptor("appf", nil, creator)

if not a.send then
msgBox "An error has occured"
else

end if
```

6.0.154   How to launch disc utility?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use this code:
Example:

```
dim f as FolderItem = LaunchServicesFindApplicationForInfoMBS("","com.apple.DiskUtility","")

if f<>Nil then
f.Launch
end if
```

Notes: This works even if people renamed the disc utility or moved it to another folder.

6.0.155   How to make a lot of changes to a REAL SQL Database faster?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You may try to embed your changes to the database between two transaction calls.
Example:

dim db as Database // some database

db.SQLExecute "BEGIN TRANSACTION"
// Do some Stuff
db.SQLExecute "END TRANSACTION"

Notes: This can increase speed by some factors.

6.0.156   How to make a NSImage object for my retina enabled app?

Plugin Version: all, Platform: macOS.

Answer: You can use code like this:
Example:

Function NewRetinaImage(pic as Picture, mask as Picture = nil) As NSImageMBS
// first make a NSImageMBS from it
dim n as new NSImageMBS(pic, mask)

// now set to half the size, so we have 2x pixels for the image
n.size = new NSSizeMBS(n.width/2, n.height/2)

// and return
Return n
End Function

Notes: The thing to do is to have 2x the pixels, but assign a size to the image which gives it the right size in points.
You can pass the NSImageMBS from here to NSMenuItemMBS. For Retina displays, the full resolution is used. For others it will be reduced.

6.0.157   How to make a window borderless on Windows?

Plugin Version: all, Platform: Windows.

Answer: Try this declares:
Example:

```
// Sets window to borderless popup type, and sets its initial dimensions.
// Call this method, then Win32SetBorderlessPos, and then RB's Show
// method. Use RB Frame type 7 (Global Floating Window).

Const SWP_NOMOVE = &H2
Const SWP_FRAMECHANGED = &H20
Const HWND_TOPMOST = -1
Const GWL_STYLE = -16
Const WS_POPUPWINDOW = &H80880000

Dim styleFlags as Integer

#If TargetWin32 Then

Declare Function SetWindowLong Lib "user32" Alias "SetWindowLongA" (hwnd as Integer, nIndex as Integer, dwNewLong as Integer) as Integer
Declare Function SetWindowPos Lib "user32" (hwnd as Integer, hWndInstertAfter as Integer, x as Integer, y as Integer, cx as Integer, cy as Integer, flags as Integer) as Integer

styleFlags = SetWindowLong( w.WinHWND, GWL_STYLE, WS_POPUPWINDOW )
styleFlags = BitwiseOr( SWP_FRAMECHANGED, SWP_NOMOVE )
styleFlags = SetWindowPos( w.WinHWND, HWND_TOPMOST, 0, 0, wd, ht, styleFlags )

#EndIf
```

6.0.158　How to make an alias using AppleEvents?

Plugin Version: all, Platform: macOS.

Answer: Try this code:
Example:

```
Sub MakeAlias(folder as folderitem, target as folderitem, aliasname as string)
dim ev as AppleEvent
dim myResult as boolean
dim properties as AppleEventRecord

ev = NewAppleEvent("core","crel","MACS")
ev.MacTypeParam("kocl") = "alis"
ev.FolderItemParam("to ") = target
ev.FolderItemParam("insh") = folder

properties=new AppleEventRecord
```

properties.StringParam("pnam")=aliasname

ev.RecordParam("prdt")=properties

myResult = ev.send
// true on success, false on error
End Sub

Notes: Call it like this:
MakeAlias SpecialFolder.Desktop, SpecialFolder.Desktop.Child("Gif Copy.rb"), "test.rb alias"

Seems to not work on Mac OS X 10.6

6.0.159   How to make AppleScripts much faster?

Plugin Version: all, Platform: macOS.

Answer: use "ignoring application responses" like in this example:
Notes: on run { fn,fpx,fpy }
ignoring application responses
tell app "Finder" to set the position of folder fn to fpx,fpy
end ignoring
end run

6.0.160   How to make double clicks on a canvas?

Plugin Version: all, Platform: macOS.

Answer:

Update: Newer Xojo versions support DoubleClick event, so you don't need this code.

Here's my tip from the tips list on how to add a double-click event to the Canvas control. The technique could easily be used for a window or any Rectcontrol:

Because of its built-in drawing methods, the Canvas control is often used to create custom interface controls. But while the Canvas control has event handlers for most mouse events, it doesn't have an event handler for DoubleClick events. Fortunately, you can add a double-click event handler to a Canvas control easily. Basically, you're going to create a new class based on Canvas and add a double-click event to that. You can then use the new class anytime you need a Canvas with a double-click event.

To create a new Canvas class with a DoubleClick event handler, do this:

1. Add a new class to your project.
2. Set the Super property of the new class to "Canvas".
3. Change the name of this new class to "DoubleClickCanvas".

A double-click occurs when two clicks occur within the users double-click time (set in the Mouse control panel on both Macintosh and Windows) and within five pixels of each other. So, you'll need a few properties to store when and where the last click occurred.

4. Add a new property with the following declaration and mark it as private: lastClickTicks as Integer
5. Add a new property with the following declaration and mark it as private: lastClickX as Integer
6. Add a new property with the following declaration and mark it as private: lastClickY as Integer

Since the Canvas control doesn't have a DoubleClick event, you will need to add one.

7. Add a new event to your class by choosing New Event from the Edit menu and enter "DoubleClick" as the event name.

Double-clicks occur on MouseUp. In order for the mouseUp event to fire, you must return True in the MouseDown event.

8. In the MouseDown event, add the following code:
Return True

In the MouseUp event, you will need to determine what the users double-click time is. This value is represented on both the Mac and Windows in ticks. A tick is 1/60th of a second. Since there isn't a built-in function for this, you'll need to make a toolbox call. The mouseUp event code below makes the appropriate toolbox call for both Macintosh and Windows. It then compares the time of the users last click to the time of the current click and compares the location of the users last click to the location of the current click.

9. Add the following code to the MouseUp event:

dim doubleClickTime, currentClickTicks as Integer

#if targetMacOS then
Declare Function GetDblTime Lib "Carbon" () as Integer
doubleClickTime = GetDblTime()
#endif

#if targetWin32 then
Declare Function GetDoubleClickTime Lib "User32.DLL" () as Integer

doubleClickTime = GetDoubleClickTime()/60 // convert to ticks from milliseconds
#endif

currentClickTicks = ticks
//if the two clicks happened close enough together in time
if (currentClickTicks - lastClickTicks) <= doubleClickTime then
//if the two clicks occured close enough together in space
if abs(X - lastClickX) <= 5 and abs(Y - LastClickY) <= 5 then
DoubleClick //a double click has occured so call the event
end if
end if
lastClickTicks = currentClickTicks
lastClickX = X
lastClickY = Y

10. Now to test out your new DoubleClickCanvas, drag the class from the Project window to a window in your project to create an instance of it.

11. Double-click on the canvas you just added to your window to open the Code Editor. Notice that the canvas has a DoubleClick event handler. In this event handler, add the following code:
BEEP

6.0.161 How to make my Mac not sleeping?

Plugin Version: all, Platform: macOS.

Answer: Just inform the Mac OS about some system activity with code like this:
Example:

```
Sub UpdateSystemActivity()

#if TargetCarbon
declare function myUpdateSystemActivity lib "Carbon" alias "UpdateSystemActivity" (activity as Integer)
as short

const OverallAct = 0 // Delays idle sleep by small amount */
const UsrActivity = 1 // Delays idle sleep and dimming by timeout time */
const NetActivity = 2 // Delays idle sleep and power cycling by small amount */
const HDActivity = 3 // Delays hard drive spindown and idle sleep by small amount */
const IdleActivity = 4 // Delays idle sleep by timeout time */

dim e as Integer

e=myUpdateSystemActivity(UsrActivity)
```

// you may react on an error if e is not 0 after the call.

#endif
End Sub

Notes: You may use another constant if you prefer some different behavior.
Call it maybe every second.

6.0.162   How to make my own registration code scheme?

Plugin Version: all, Platform: Windows.

Answer: There are excellent articles about how to make a registratin code scheme, but you can also simply use our RegistrationEngineMBS class.
Notes: If you need a license text, why not use the one from Xojo as a starting point?

6.0.163   How to make small controls on Mac OS X?

Plugin Version: all, Platform: macOS.

Answer: You can try this code on Mac OS X:
Example:

```
'/*
'* Use the control's default drawing variant. This does not apply to
'* Scroll Bars, for which Normal is Large.
'*/
const kControlSizeNormal = 0

'/*
'* Use the control's small drawing variant. Currently supported by
'* the Check Box, Combo Box, Radio Button, Scroll Bar, Slider and Tab
'* controls.
'*/
const kControlSizeSmall = 1

'/*
'* Use the control's small drawing variant. Currently supported by
'* the Indeterminate Progress Bar, Progress Bar and Round Button
'* controls.
'*/
const kControlSizeLarge = 2
```

```
'/*
'* Control drawing variant determined by the control's bounds. This
'* ControlSize is only available with Scroll Bars to support their
'* legacy behavior of drawing differently within different bounds.
'*/
const kControlSizeAuto = &hFFFF

const kControlSizeTag = "size"

declare function SetControlData lib "Carbon" (controlhandle as Integer, part as short, tagname as OS-
Type, size as Integer, data as ptr) as short

dim m as MemoryBlock

m=NewMemoryBlock(2)
m.UShort(0)=kControlSizeSmall

Title=str(SetControlData(CheckBox1.Handle, 0, kControlSizeTag, 2, m))
```

6.0.164   How to mark my Mac app as background only?

Plugin Version: all, Platform: macOS.

Answer: You can run a build script on each build with this code:
Example:

```
Dim App As String = CurrentBuildLocation + "/" + CurrentBuildAppName + ".app"
Call DoShellCommand("/usr/bin/defaults write " + App + "/Contents/Info ""NSUIElement"" YES")
```

Notes: This will set the NSUIElement flag to YES.

6.0.165   How to move a file or folder to trash?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use code like below:
Example:

```
Function MoveToTrash(f as FolderItem) As Boolean
#if TargetMacOS then
dim r as FolderItem
dim e as Integer = MacFileOperationMBS.MoveObjectToTrashSync(f, r, MacFileOperationMBS.kFSFile-
OperationDefaultOptions)
```

```
if e = 0 then
Return true // Ok
end if

#elseif TargetWin32 then
dim w as new WindowsFileCopyMBS

dim flags as Integer = w.FileOperationAllowUndo + w.FileOperationNoErrorUI + w.FileOperationSilent
+ w.FileOperationNoConfirmation
if w.FileOperationDelete(f, flags) then
Return true // OK
end if

flags = w.FileOperationNoErrorUI + w.FileOperationSilent + w.FileOperationNoConfirmation
if w.FileOperationDelete(f, flags) then
Return true // OK
end if
#else
// Target not supported
break
Return false
#endif
End Function
```

Notes: If you want to move a file to trash, you could use f.movefileto f.trashfolder, but that will overwrite existing files in the trash. You can use our MacFileOperationMBS class to move a file on Mac to the trash. And it uses the same code as the Finder, so files are renamed when the same name is already in use in the trash:

On Windows we use WindowsFileCopyMBS class.
Requires Mac OS X 10.5.

6.0.166   How to move an application to the front using the creator code?

Plugin Version: all, Platform: macOS.

Answer: This makes SimpleText (Code ttxt) to the frontmost application:
Example:

```
dim a as appleevent

a=newappleEvent("misc","actv","ttxt")
```

```
if a.send then
end if
```

Notes: (Code is Mac only)

6.0.167 How to move file with ftp and curl plugin?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can set post/pre quotes to have ftp commands executed before or after the download/upload.
Example:

```
dim d as CURLMBS // your curl object

// rename/move file
dim ws() As String
ws.Append "RNFR Temp.txt"
ws.append "RNTO MyFile.txt"

d.SetOptionPostQuote(ws)
```

Notes: Use SetOptionPostQuote, SetOptionPreQuote or SetOptionQuote.
The ftp commands you pass here are native ftp commands and not the commands you use with ftp applications. So rename is two commands. First RNFR to tell where to rename from and second RNTO with the new file name. To delete use DELE and the file path.

6.0.168 How to normalize string on Mac?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use code like below:
Example:

```
Function Normalize(t as string) As string
const kCFStringNormalizationFormD = 0 // Canonical Decomposition
const kCFStringNormalizationFormKD = 1 // Compatibility Decomposition
const kCFStringNormalizationFormC = 2 // Canonical Decomposition followed by Canonical Composition
const kCFStringNormalizationFormKC = 3 // Compatibility Decomposition followed by Canonical Composition

dim s as CFStringMBS = NewCFStringMBS(t)
dim m as CFMutableStringMBS = s.Normalize(kCFStringNormalizationFormD)
```

Return m.str
End Function

Notes: This uses Apple's CFString functions to normalize unicode variants.

6.0.169 How to obscure the mouse cursor on Mac?

Plugin Version: all, Platform: macOS.

Answer: Try this declare:
Example:

Declare Sub ObscureCursor Lib "Carbon" ()

ObscureCursor

Notes: The MBS Plugin has this function, but it's not supported for Windows.

6.0.170 How to open icon file on Mac?

Plugin Version: all, Platform: macOS.

Answer: Use the NSImageMBS class like this:
Example:

dim f as FolderItem = SpecialFolder.Desktop.Child("test.ico")
dim n as new NSImageMBS(f)

window1.Backdrop = n.CopyPictureWithMask

6.0.171 How to open PDF in acrobat reader?

Plugin Version: all, Platform: macOS.

Answer: Try this code:
Example:

dim pdf as FolderItem = SpecialFolder.Desktop.Child("test.pdf")

```
// open PDF in Acrobat Reader on Mac:

// find app
dim bundleID as string = "com.adobe.Reader"
dim app as FolderItem = LaunchServicesFindApplicationForInfoMBS("", bundleID, "")

if app<>nil then

// launch app with parameters

dim docs() as FolderItem
docs.Append pdf

dim param as new LaunchServicesLaunchParameterMBS
param.Defaults = true
param.Application = app

dim x as FolderItem = LaunchServicesOpenXMBS(docs, param)

// on failure, simply launch it
if x = nil then
pdf.Launch(true)
end if

else
pdf.Launch(true)
end if
```

Notes: On Windows, simply use pdf.launch or WindowsShellExecuteMBS.

6.0.172   How to open printer preferences on Mac?

Plugin Version: all, Platform: macOS.

Answer: You can use our OpenMacOSXPreferencesPaneMBS function like this:
Example:

```
dim e as Integer = OpenMacOSXPreferencesPaneMBS("PrintAndFax")
if 0 = e then
MsgBox "OK"
elseif e = -43 then
MsgBox "File not found."
else
MsgBox "Error: "+str(e)
end if
```

6.0.173   How to open special characters panel on Mac?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: We have functions for that in Cocoa and Carbon.
Example:

dim a as new NSApplicationMBS
a.orderFrontCharacterPalette

Notes: For Cocoa, you can use orderFrontCharacterPalette method in NSApplicationMBS class.

Or simply for Carbon and Cocoa the ShowCharacterPaletteMBS method.

6.0.174   How to optimize picture loading in Web Edition?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use the WebPicture class.
Notes: Take your picture and create a WebPicture object. Store this WebPicture in a property of the WebPage, Session or app (as global as possible). On the first time you use this picture on an user session, the browser will load it. Second time you use it, the browser will most likely pick it from the cache.
Having pictures in App or some module reuses the same picture for all sessions which reduces memory footprint.
This does not work well with pictures you change very often or use only for one webpage on one user.

If you like to see an example, check our Map example.

6.0.175   How to parse XML?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use code like this:
Example:

dim s as string = "<test><test /></test>"

try

```
dim x as new XmlDocument(s)
MsgBox "OK"
catch xe as XmlException
MsgBox "invalid XML"
end try
```

Notes: If you got an exception, you have a parse error.

6.0.176   How to play audio in a web app?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use the HTML5 audio tag and control it with javscript.
Notes: This is just another example app I made today. It plays a christmas song. The audio file is provided by the application to the server, so no external web server is needed and this application can run stand alone. To compile and run you need Xojo 2010r5.

In the open event we search the audio files and open them as binarystreams. We create the two webfile objects. Those webfiles are part of the app class, so we have them globally. There we set the data with the content of our streams. We also define file names and mime types. They are needed so browser know what we have here:

```
audioFileM4V = new WebFile
audioFileM4V.Data = bM.Read(BM.Length)
audioFileM4V.Filename = "music.m4a"
audioFileM4V.MIMEType = "audio/m4a"


audioFileOGG = new WebFile
audioFileOGG.Data = bO.Read(BO.Length)
audioFileOGG.Filename = "music.ogg"
audioFileOGG.MIMEType = "audio/ogg"
```

Next in the open event of the webpage we have a PageSource control. The location is set to be before content. In the open event we define the html code for this. First we pick the URLs for the audio files. Than we build the html to use the audio tag. As you see, we give it an ID for later use and have it preload automatically. If you add an autoplay tag, you can have the audio play right away. Inside the audio tag we have two sources so we provide audio for both Firefox (OGG) and Safari (MPEG4). Finally we have a text to display if HTML5 audio tag is not supported.

You can set the source in the EditSource event:

dim urlo as string = app.audioFileOGG.URL
dim urlm as string = app.audioFileM4V.URL
me.Source = ”<audio id=””mymusic”” preload=””auto””><source src=”””+urlo+””” type=””audio/ogg””
/><source src=”””+urlm+””” type=””audio/mpeg”” />Your browser does not support the audio ele-
ment.</audio>”

Next in the Play button we execute code to play the audio. This is a short javascript code which searches
in the html document for the element with the ID ”mymusic” which is the ID of our audio tag above. Once
we got the object, we call it's play method to start playback.

me.ExecuteJavaScript(”document.getElementById('mymusic').play();”)

same for pause:

me.ExecuteJavaScript(”document.getElementById('mymusic').pause();”)

and finally for changing volume:

me.ExecuteJavaScript(”document.getElementById('mymusic').volume=”+str(me.Value/100.0)+”;”)

6.0.177   How to pretty print xml?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use the XML Transform method with the right XLS.
Notes: Learn more here:
http://docs.xojo.com/index.php/XMLDocument.Transform

6.0.178   How to print to PDF?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: This code below shows how to redirect printing to a PDF file on Mac OS X.
Example:

```
// get Xojo printer setup
dim p as new PrinterSetup

// now put it into NSPrintInfo to manipulate
dim n as new NSPrintInfoMBS
n.SetupString = p.SetupString
```

```
// change destination to file
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
n.SetSaveDestination(f)

// move back
p.SetupString = n.SetupString

// and print as usual
dim g as Graphics = OpenPrinter(p)
g.DrawString "Hello World", 20, 20
```

Notes: And you can use normal graphics class for that.

6.0.179   How to query Spotlight's Last Open Date for a file?

Plugin Version: all, Platform: macOS.

Answer: You can use a MDItemMBS objec to query this value:
Example:

```
Function LastOpenedDate(Extends F As FolderItem, DefaultOtherDates As Boolean = True) As Date
#If TargetMacOS Then
Dim xMDItem as New MDItemMBS(F)
Dim xDate as Variant

If xMDItem <>Nil Then
xDate = xMDItem.GetAttribute(xMDItem.kMDItemLastUsedDate).DateValue
If xDate IsA Date Then Return xDate
Else
If xDate <>Nil Then Break
End If
#EndIf

If DefaultOtherDates Then
If F.ModificationDate <>Nil Then Return F.ModificationDate
If F.CreationDate <>Nil Then Return F.CreationDate
End If
End Function
```

Notes: Thanks for Josh Hoggan for this example code.

6.0.180   How to quit windows?

Plugin Version: all, Platform: Windows.

Answer: Try this code:
Example:

```
#if targetwin32 then
dim i1,i2,r as Integer
declare function ExitWindowsEx lib "user32" (uFlags as Integer, dwReserved as Integer) as Integer
i1 = 2
i2 = 0
r = ExitWindowsEx(i1,i2)
if r<>0 then
' Error()
end if

#endif
```

Notes: uFlags parameters:

```
'4 = EWX_Force
'0 = EWX_Logoff
'2 = EWX_Reboot
'1 = EWX_shutdown, should shut down computer
```

Also check the ExitWindowsMBS method.

6.0.181   How to read a CSV file correctly?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: With all the rules for quotes and delimiters, you can simply use the SplitCommaSeparatedValuesMBS method in our plugins like this:
Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.csv")
dim t as TextInputStream = f.OpenAsTextFile

while not t.EOF
dim s as string = t.ReadLine(encodings.ASCII)

dim items() as string = SplitCommaSeparatedValuesMBS(s, ";", """")
```

List.AddRow ""
dim u as Integer = UBound(items)
for i as Integer = 0 to u
List.Cell(List.LastIndex,i) = items(i)
next

wend

Notes: Please make sure you choose the right text encoding.

6.0.182   How to read the command line on windows?

Plugin Version: all, Platform: Windows.

Answer: Try this code:
Example:

```
#if targetwin32 then
dim line as string
Dim mem as MemoryBlock

Declare Function GetCommandLineA Lib "kernel32" () As Ptr

mem=GetCommandLineA()
s=mem.cstring(0)

#endif
```

Notes: Newer Xojo versions have a system.commandline property.

6.0.183   How to render PDF pages with PDF Kit?

Plugin Version: all, Platform: Windows.

Answer: Try this code:
Example:

```
// choose a file
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")

// open it as PDF Document
dim sourceFile as New PDFDocumentMBS(f)
```

```
if sourceFile.handle <>0 then // it is a PDF file

// get upper bound of pages
dim c as Integer = sourceFile.pageCount-1

// from first to last page
for n as Integer = 0 to c

// pick that page
dim page as PDFPageMBS = sourceFile.pageAtIndex(n)

// render to image
dim p as NSImageMBS = page.Render

// and convert to RB picture and display
Backdrop = p.CopyPictureWithMask


next

end if
```

Notes: PDFKit works only on Mac OS X.

6.0.184   How to restart a Mac?

Plugin Version: all, Platform: macOS.

Answer: Ask the Finder via Apple Events:
Example:

```
dim ae as appleevent
ae=newappleEvent("FNDR","rest","MACS")
if not ae.send then
msgBox "The computer couldn't be restarted."
end if
```

6.0.185   How to resume ftp upload with curl plugin?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: CURL supports that and you simply need to set the right options.

Notes: First of course OptionUpload must be true. Second OptionFTPAppend must be true so the OptionResumeFrom is used. Store there (or in OptionResumeFromLarge) your start value.
Don't forget to implement the read event and return data there as requested.

6.0.186   How to rotate a PDF page with CoreGraphics?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: This code opens a PDF and draws the first page into a new PDF with 90¬∞ rotation.
Example:

```
// Rotate a PDF page

// our files
dim sourcefile as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim destfile as FolderItem = SpecialFolder.Desktop.Child("rotated.pdf")

// open PDF
dim pdf as CGPDFDocumentMBS = sourcefile.OpenAsCGPDFDocumentMBS

// query media size of first page
dim r as CGRectMBS = pdf.MediaBox(1)

// create new PDF
dim c as CGContextMBS = destfile.NewCGPDFDocumentMBS(r,"title","Author","Creator")

// create rotated rectangle
dim nr as new CGRectMBS(0,0,r.Height,r.Width)

// create new page
c.BeginPage nr
c.SaveGState

const pi = 3.14159265

// rotate by 90¬∞
c.RotateCTM pi*1.5

// fix origin
c.TranslateCTM -r.width,0

// draw PDF
c.DrawCGPDFDocument pdf,r,1

// cleanup
c.RestoreGState
c.EndPage
```

c = nil

```
// show in PDF viewer
destfile.Launch
```

Notes: This code is Mac only as it needs CoreGraphics.

6.0.187   How to rotate image with CoreImage?

Plugin Version: all, Platform: macOS.

Answer: Use the code like the one below:
Example:

```
// Rotate image with CoreImage

// load image
dim f as FolderItem = SpecialFolder.Desktop.Child("test.png")
dim image as new CIImageMBS(f)

// rotate 45 degree
dim n as new NSAffineTransformMBS
n.rotateByDegrees(45)

dim TransformFilter as new CIFilterAffineTransformMBS
TransformFilter.inputImage = image
TransformFilter.inputTransform = n

// get result
dim resultImage as CIImageMBS = TransformFilter.outputImage

// for saving to file
dim outputImage as NSImageMBS = resultImage.RenderNSImage(false)

f = SpecialFolder.Desktop.Child("output.png")
dim b as BinaryStream = BinaryStream.Create(f, true)
b.Write outputImage.PNGRepresentation

// as Xojo picture object for display
dim pic as Picture = outputImage.CopyPictureWithMask

Backdrop = pic
```

6.0.188   How to run a 32 bit application on a 64 bit Linux?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Install 32 bit compatibility libraries.
Notes: The package is called ia32-libs for ubuntu (and others).
Some applications need to be run on a 32 bit system as they need some hardware related libraries. Like libUSB or libHID for USB devices.

6.0.189   How to save HTMLViewer to PDF with landscape orientation?

Plugin Version: all, Platform: macOS.

Answer: You can use NSPrintInfoMBS to change the options for PrintToPDFFile function.
Example:

```
// make it landscape
dim n as NSPrintInfoMBS = NSPrintInfoMBS.sharedPrintInfo
n.orientation = n.NSLandscapeOrientation

// save html to file
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
call HTMLViewer1.PrintToPDFFileMBS(f,10,30,10,30)
```

Notes: You may want to reset options later.
This code is only for Mac OS X.

6.0.190   How to save RTFD?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: With NSTextViewMBS you can use this code to save to RTFD:
Example:

```
// save text as RTFD including image attachments
dim f as FolderItem = GetSaveFolderItem(FileTypes1.ApplicationRtfd, "test.rtfd")

if f = nil then Return

dim a as NSAttributedStringMBS = textView.textStorage
dim w as NSFileWrapperMBS = a.RTFDFileWrapperFromRange(0, a.length, DocumentAttributes)

dim e as NSErrorMBS
if w.writeToFile(f, e) then
```

else
MsgBox e.LocalizedDescription
end if

Notes: For TextArea you can query the underlaying NSTextViewMBS object via TextArea.NSTextViewMBS method.

6.0.191   How to save RTFD?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: How to load PDF to htmlviewer on desktop?
Example:

```
Public Sub LoadPDFData(viewer as HTMLViewer, PDFData as string)
Dim base64string As String = EncodeBase64(PDFData)

// remove line endings to make it a big line
base64string = ReplaceLineEndings(base64string, "")

// build data URL
// https://en.wikipedia.org/wiki/Data_URI_scheme
Dim dataURL As String = "data:application/pdf;base64," + base64string

// show in webviewer
HTMLViewer1.LoadURL(dataURL)

// may not work everywhere due to URL length limit
// for Web projects, use WebFile instead!
End Sub
```

Notes: This avoids a temporary file, which may also work.
For Web Apps, please use WebFile.

6.0.192   How to scale a picture proportionally with mask?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: For a proportional scaling, we calculate the new picture size relative to the target maximum size.
Example:

Function ProportinalScaledWithMask(extends pic as Picture, Width as Integer, Height as Integer) As Picture
// Calculate scale factor

dim faktor as Double = min(Height / Pic.Height, Width / Pic.Width)

// Calculate new size
dim w as Integer = Pic.Width * faktor
dim h as Integer = Pic.Height * faktor

// create new picture
dim NewPic as new Picture(w,h,32)

// check if we have a mask and clear it
dim m as picture = pic.mask(False)
pic.mask = nil

// draw picture in the new size
NewPic.Graphics.DrawPicture Pic, 0, 0, w, h, 0, 0, Pic.Width, Pic.Height

if m <>nil then
// restore mask and scale it
pic.mask = m
NewPic.mask.Graphics.DrawPicture m, 0, 0, w, h, 0, 0, Pic.Width, Pic.Height
end if

// return result
Return NewPic
End Function

Notes: This version handles mask. As you see we actually have to remove mask in order to copy the picture part correctly.

6.0.193   How to scale a picture proportionally?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: For a proportional scaling, we calculate the new picture size relative to the target maximum size.
Example:

Function ProportionalScaled(extends pic as Picture, Width as Integer, Height as Integer) As Picture
// Calculate scale factor

dim faktor as Double = min(Height / Pic.Height, Width / Pic.Width)

```
// Calculate new size
dim w as Integer = Pic.Width * faktor
dim h as Integer = Pic.Height * faktor

// create new picture
dim NewPic as new Picture(w,h,32)

// draw picture in the new size
NewPic.Graphics.DrawPicture Pic, 0, 0, w, h, 0, 0, Pic.Width, Pic.Height

// return result
Return NewPic
End Function
```

Notes: This does not handle mask, but you can scale the mask the same way and assign it to the new picture.
(see other FAQ entry with mask)

6.0.194   How to scale/resize a CIImageMBS?

Plugin Version: all, Platform: Windows.

Answer: Use the CIFilterLanczosScaleTransform filter to scale down a picture to a specific size.
Example:

```
Dim pic As Picture = LogoMBS(500)
Dim image As CIImageMBS = CIImageMBS.imageWithPicture(pic)

Dim filter As New CIFilterLanczosScaleTransformMBS

Const targetWidth = 600.0
Const targetHeight = 400.0

Dim scale As Double = targetHeight / image.Extent.Height
Dim aspect As Double = targetWidth / (image.Extent.Width * scale)

filter.inputImage = image
filter.inputScale = scale
filter.inputAspectRatio = aspect

Dim result As Picture = filter.outputImage.RenderPicture

Backdrop = result
```

Notes: This is same code as our scaleTo convenience method.

6.0.195 How to scale/resize a picture?

Plugin Version: all, Platform: Windows.

Answer: There are several ways to scale or resize a picture. The easiest way may be the ScaleMBS function in the Picture class.
Example:

dim Original,Scaled as Picture

Original=LogoMBS(500)
Scaled=Original.ScaleMBS(100,100,true)

Notes: The plugin ways:
- GraphicsMagick can scale/resize.
- CoreImage scale filter may result in the fastest and best images on Mac OS X 10.4.
- NSImageMBS can scale, but is Mac OS X only.
- CGImageMBS can scale, but is Mac OS X only.
- CIImageMBS can scale, but is Mac OS X only.
- QuickTime Graphics exporter and importer can be connected to scale. (this was used more often a few years ago)
- ImageMagick can scale very nice and crossplatform. But the ImageMagick libraries are big.
- The picture.ScaleMBS function is self written and results in equal output on Mac, Windows and Linux without any additional libraries installed.
- Picture.ScalingMBS does crossplatform scaling with several modes.

with pure Xojo:
- make a new picture and draw the old one with new size inside.

6.0.196 How to search with regex and use unicode codepoints?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can specify unicode characters in search string with backslash x and digits.
Example:

dim r as RegExMbs
dim s as string
dim c as Integer

s="123 √§√√º ABC 456"

r=new RegExMBS
if r.Compile(".√.") then
c=r.Execute(s,0)
MsgBox str(c)+" "+str(r.Offset(0))+" "+str(r.Offset(1))
// shows: 1 4 10
// 1 for ubound of the offset array
// 4 for 4 bytes before the matched pattern
// 10 for the 10 bytes before the end of the matched pattern
end if

r=new RegExMBS
if r.Compile(".\xF6.") then // finds √ using Unicode codepoint
c=r.Execute(s,0)
MsgBox str(c)+" "+str(r.Offset(0))+" "+str(r.Offset(1))
// shows: 1 4 10
// 1 for ubound of the offset array
// 4 for 4 bytes before the matched pattern
// 10 for the 10 bytes before the end of the matched pattern
end if

6.0.197   How to see if a file is invisible for Mac OS X?

Plugin Version: all, Platform: macOS.

Answer: Try this function:
Example:

Function Invisible(F As FolderItem) As Boolean
Dim TIS As TextInputStream
Dim S,All As String
Dim I as Integer
dim g as folderitem

If Left(F.Name,1)="." or not f.visible Then
Return True
End If

g=F.Parent.Child(".hidden")
If g.Exists Then
TIS=g.OpenAsTextFile
if tis<>Nil then
All=TIS.ReadAll
For I=1 to CountFields(All,Chr(11))
S=NthField(All, Chr(11), I)

```
If S=F.name Then
Return True
End If
Next
end if
End if
End Function
```

6.0.198   How to set cache size for SQLite or REALSQLDatabase?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You use the pragma cache_size command on the database.
Example:

```
// set cache size to 20000 pages which is about 20 MB for default page size
dim db as REALSQLDatabase
db.SQLExecute "PRAGMA cache_size = 20000"
```

Notes: Default cache size is 2000 pages which is not much.
You get best performance if whole database fits in memory.
At least you should try to have a cache big enough so you can do queries in memory.
You only need to call this pragma command once after you opened the database.

6.0.199   How to set the modified dot in the window?

Plugin Version: all, Platform: macOS.

Answer: Try this declares:
Example:

```
window1.ModifiedMBS=true
```

6.0.200   How to show a PDF file to the user in a Web Application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use a WebHTMLViewer control and load the
Example:

dim CurrentFile as WebFile // a property of the WebPage

// define the PDF file
CurrentFile = new WebFile
CurrentFile.Filename = "test.pdf"
CurrentFile.MIMEType = "application/pdf"
CurrentFile.Data = "some pdf data" // MyDynaPDF.GetBuffer

// load into html viewer
HTMLViewer1.URL = CurrentFile.URL

Notes: See our Create PDF example for the Xojo Web Edition.

6.0.201   How to show Keyboard Viewer programmatically?

Platform: macOS.

Answer: Use Xojo or AppleScript to launch the KeyboardViewerServer.app.
Example:

dim a as new AppleScriptMBS
dim text as string
dim lines(-1) as string

lines.append "set theApplication to ""KeyboardViewerServer"""
lines.append "set thePath to ""/System/Library/Components/KeyboardViewer.component/Contents/Shared-Support/KeyboardViewerServer.app"""
lines.append ""
lines.append "set POSIXPath to ((POSIX file thePath) as string)"
lines.append "tell application ""System Events"" to set isRunning to 0 <(count (application processes whose name is theApplication))"
lines.append "if isRunning then tell application POSIXPath to quit"
lines.append "delay 0.15"
lines.append ""
lines.append "ignoring application responses"
lines.append " tell application POSIXPath to run"
lines.append "end ignoring"

text=join(lines,EndOfLine.macintosh)

a.Compile text
a.Execute

Notes: AppleScript code:

set theApplication to "KeyboardViewerServer"
set thePath to "/System/Library/Components/KeyboardViewer.component/Contents/SharedSupport/KeyboardViewerServer.app"

set POSIXPath to ((POSIX file thePath) as string)
tell application "System Events" to set isRunning to 0 <(count (application processes whose name is theApplication))
if isRunning then tell application POSIXPath to quit
delay 0.15

ignoring application responses
tell application POSIXPath to run
end ignoring

6.0.202 How to show the mouse cursor on Mac?

Plugin Version: all, Platform: macOS.

Answer: Try this declare:
Example:

Declare Sub ShowCursor Lib "Carbon" ()

ShowCursor

Notes: The MBS Plugin has this function and supports it on Windows, too.

6.0.203 How to shutdown a Mac?

Plugin Version: all, Platform: macOS.

Answer: Ask the Finder via Apple Events:
Example:

dim ae as appleevent
ae=newappleEvent("FNDR","shut","MACS")
if not ae.send then
msgBox "The computer couldn't be shutdown."
end if

Notes: Or toolbox call (Attention: This method will stop the computer immediataly: No document asked to be saved, all applications quitting without knowing).

Declare Sub ShutDwnPower Lib "Carbon" ()
ShutDwnPower

6.0.204   How to sleep a Mac?

Plugin Version: all, Platform: macOS.

Answer: Ask the Finder via Apple Events:
Example:

dim ae as appleevent
ae=newappleEvent("FNDR","slep","MACS")
if not ae.send then
msgBox "The computer doesn't want to sleep."
end if

6.0.205   How to speed up rasterizer for displaying PDFs with DynaPDF?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Here a few speed tips:
Notes:

- Use the DynaPDFRasterizerMBS function instead of our render functions.

- Reuse DynaPDFRasterizerMBS as long as the target picture size doesn't change.

- Import only the PDF pages you want to display.

- Let DynaPDF do zooming, rotating or other effects instead of you change it.

6.0.206   How to use PDFLib in my RB application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: The PDFlib plugin was discontinued in favor of our DynaPDF plugin.
Notes: If you need help to move, please contact us.

6.0.207 How to use quotes in a string?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Just double them.
Example:

msgbox "This String contains ""quotes""."

6.0.208 How to use Sybase in Web App?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Please use our MBS Xojo SQL Plugin to connect to a Sybase Database in your web application.
Notes: If you see db.Connect giving the error message "cs_ctx_alloc ->CS_MEM_ERROR", than some things are not setup right for Sybase.
The Apache process may not have all the SYBASE environment variables being set when the CGI was launched.

Adding these lines to /etc/httpd/conf/httpd.conf stopped the faux memory errors for us:

SetEnv LD_LIBRARY_PATH /opt/sybase/OCS-15_0/lib:/opt/sybase/OCS-15_0/lib3p64:/opt/sybase/OCS-15_0/lib3p:
SetEnv SYBROOT /opt/sybase
SetEnv SYBASE_OCS /opt/sybase
SetEnv SYBASE /opt/sybase

6.0.209 How to use the Application Support folder?

Plugin Version: all, Platform: macOS.

Answer:

I was saving a registration code for an app to the Preferencefolder.
People on the list have suggested that it would be better in
the ApplicationSupportFolder. How do I save the file called CWWPrefs
into that folder using MBS?

I have checked for examples and the docs but can't see how to apply it

//f = SpecialFolder.Preferences.child("CWWPrefs")
f = ApplicationSupportFolderMBS(-32768)

Example:

dim folder,file as FolderItem

folder = createApplicationSupportFolderMBS(-32763)

if folder=nil then
// Some very old Mac OS Versions may not support it
// or the plugin may fail for any reason
folder=SpecialFolder.Preferences
end if

file=folder.Child("CWWPrefs")

MsgBox file.NativePath

Notes:

You may not be able to write there with a normal user account!

6.0.210　How to use the IOPMCopyScheduledPowerEvents function in Xojo?

Plugin Version: all, Platform: macOS.

Answer: You can use the following code which does this using the SoftDeclareMBS class.
Example:

Sub Open()
dim c as CFDateMBS
dim t as CFAbsoluteTimeMBS

// get current date
c=NewCFDateMBS

// in absolute time (seconds since x)
t=c.AbsoluteTime

// add 600 seconds (= 10 Minutes)
t.Value=t.Value+600

// Make a Date from it
c=t.Date

// Schedule the event
// 0 on success
// E00002C1 for missing root rights

```
Title=hex(schedulePowerEvent(c, "wake"))

// Just for information, display the scheduled stuff
CFShowMBS CopyScheduledPowerEvents
End Sub

Function CopyScheduledPowerEvents() As cfarrayMBS
dim s as SoftDeclareMBS
dim m as MemoryBlock

s=new SoftDeclareMBS

if s.LoadLibrary("IOKit.framework") then
if s.LoadFunction("IOPMCopyScheduledPowerEvents") then
if s.CallFunction(0,nil) then
Return NewCFArrayMBSHandle(s.Result,true)
else
MsgBox "Failed to Call IOPMCopyScheduledPowerEvents."
end if
else
MsgBox "Failed to load IOPMCopyScheduledPowerEvents."
end if
else
MsgBox "Failed to load IOKit."
end if

Return nil
End Function

Function SchedulePowerEvent(time_to_wake as CFDateMBS, Type as CFStringMBS) as Integer
dim s as SoftDeclareMBS
dim m as MemoryBlock

'/*
'* Types of power event
'* These are potential arguments to IOPMSchedulePowerEvent().
'* These are all potential values of the kIOPMPowerEventTypeKey in the CFDictionaries
'* returned by IOPMCopyScheduledPowerEvents().
'*/
'/*!
'@define kIOPMAutoWake
'@abstract Value for scheduled wake from sleep.
'*/
'#define kIOPMAutoWake "wake"
'
'/*!
'@define kIOPMAutoPowerOn
'@abstract Value for scheduled power on from off state.
```

```
'*/
'#define kIOPMAutoPowerOn "poweron"
'
'/*!
'@define kIOPMAutoWakeOrPowerOn
'@abstract Value for scheduled wake from sleep, or power on. The system will either wake OR
'power on, whichever is necessary.
'*/
'
'#define kIOPMAutoWakeOrPowerOn "wakepoweron"
'/*!
'@define kIOPMAutoSleep
'@abstract Value for scheduled sleep.
'*/
'
'#define kIOPMAutoSleep "sleep"
'/*!
'@define kIOPMAutoShutdown
'@abstract Value for scheduled shutdown.
'*/
'
'#define kIOPMAutoShutdown "shutdown"

s=new SoftDeclareMBS

if s.LoadLibrary("IOKit.framework") then
if s.LoadFunction("IOPMSchedulePowerEvent") then

m=NewMemoryBlock(12)
m.Long(0)=time_to_wake.handle
m.Long(4)=0 // nil
m.Long(8)=type.Handle

if s.CallFunction(3,m) then
Return s.Result
end if
end if
end if

End Function
```

Notes: Requires Mac OS X and to execute root rights.

6.0.211 How to validate a GUID?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use this function below which uses a regular expression to verify that the string is a valid UUID/GUID:
Example:

```
Function IsGUID(guid as string) As Boolean
dim r as new RegEx

r.SearchPattern = "^(\{ { 0,1 } ( [ 0-9a-fA-F ] ) { 8 } -( [ 0-9a-fA-F ] ) { 4 } -( [ 0-9a-fA-F ] ) { 4 }
-( [ 0-9a-fA-F ] ) { 4 } -( [ 0-9a-fA-F ] ) { 12 } \} { 0,1 } )$ "

Return r.Search(guid)<>nil
End Function
```

Notes: Simply parsing the GUID with CFUUIDMBS does not give the same result as CFUUIDMBS will also take a string like "DDDD".

6.0.212 How to walk a folder hierarchie non recursively?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use code like this one:
Example:

```
Sub Walk(folder as FolderItem)
dim folders() as FolderItem

folders.Append folder

while UBound(folders)>=0

dim currentFolder as FolderItem = folders.pop

dim c as Integer = currentFolder.Count
for i as Integer = 1 to c
dim item as FolderItem = currentFolder.TrueItem(i)

if item = Nil then
// no permission
elseif item.Visible then // only visible

if item.Directory then
folders.Append item
```

```
else
// work with file here
end if

end if

next

wend
End Sub
```

Notes: As you see we go with a long loop which runs until we don't have more folders to process.
We ignore items we can't access due to permission limits.
And we only work visible items.
If you like, check folderitem.isBundleMBS on item to handle packages and applications better on Mac OS X.

6.0.213　I got this error: PropVal, QDPictMBS.Name (property value), Type mismatch error. Expected CGDataProviderMBS, but got Variant, Name:QDPictMBS

Plugin Version: all, Platform: macOS.

Answer: The plugins MacOSX and MacOSXCF belong together. If you use one part, please also install the other part.
Notes: We splitted the plugin because the Xojo IDE on Windows crashed on compilation.

6.0.214　I registered the MBS Plugins in my application, but later the registration dialog is shown.

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: There are two main reasons.
Notes: 1. you may use the plugin before registering them. This is often the case if you register in a window open event and use the plugin in a control open event.
On the console on Mac OS X or Windows, you may see a message like this "MBS Plugins were used by the application before the RegisterMBSPlugin function was called. Please fix this in your code!".

2. you may have mixed different plugin versions which are not compatible.
In this case you can see a message "Internal plugin registration error." on the console on Mac OS X. Newer plugins may show a message dialog reporting this. Older version simply think they are not registered.

If the installer just merges old and new applications, users may have libraries of older and newer plugin versions in the libs folder. If your application loads the wrong version, the registration fails.

If you use remote debugging, make sure you clear the tempory files there, too. Otherwise you may have old DLLs on your hard disc which may disturb your application.

You can run into issues if you use your registration code on different places of your app. Please register only once in app.open (or app Constructor). If you have several codes, simply call them one after the other.

Also check that you only call RegisterMBSPlugin with valid serial number. If you later call RegisterMBSPlugin with Demo like in example code above, you remove the license.

Next check if you can clear the Xojo caches and that helps. This includes the Xojo Scratch folder and the Plugins & Project caches. Simply locate those folders and delete them. For Windows look in hidden AppData folder in your user folder. For Mac, please check
textasciitilde /Library/Caches and your temp folders.

Finally make sure you use the right serial number. Not an older one or a misspelled one.

6.0.215 I want to accept Drag & Drop from iTunes

Plugin Version: all, Platform: macOS.

Answer: You need to accept AcceptMacDataDrop "itun" and Handle the DropObject.
Example:

```
Sub Open()
window1.AcceptMacDataDrop "itun"
End Sub

Sub DropObject(obj As DragItem)
dim s as string
dim f as folderItem
dim d as CFDictionaryMBS
dim o as CFObjectMBS
dim key as CFStringMBS
dim dl as CFDictionaryListMBS
dim i,c as Integer
dim u as CFURLMBS
dim file as FolderItem

if obj.MacDataAvailable("itun") then
s = obj.MacData("itun")
```

```
// Parse XML
o=NewCFObjectMBSFromXML(NewCFBinaryDataMBSStr(s))

// Make dictionary
if o isa CFDictionaryMBS then
d=CFDictionaryMBS(o)

// get Tracks Dictionary
key=NewCFStringMBS("Tracks")
o=d.Value(key)

if o isa CFDictionaryMBS then
d=CFDictionaryMBS(o)
dl=d.List

// Walk over all entries in the Tracks dictionary
c=dl.Count-1
for i=0 to c
o=dl.Value(i)

if o isa CFDictionaryMBS then
d=CFDictionaryMBS(o)

key=NewCFStringMBS("Location")
o=d.Value(key)
if o isa CFStringMBS then
u=NewCFURLMBSCFStringMBS(CFStringMBS(o),nil)

file=u.file
if file<>nil then
MsgBox file.NativePath
end if
end if
end if
next
end if
end if
end if
End Sub
```

Notes: The code above inside a window on Xojo 5.5 with MBS Plugin 5.3 will do it nice and show the paths.

6.0.216 I'm drawing into a listbox but don't see something.

Plugin Version: all.

Answer: If you draw this in a listbox cellbackground, you need to draw on the correct position
Example:

Function CellBackgroundPaint(g As Graphics, row as Integer, column as Integer) As Boolean
dim f as FolderItem
f=SpecialFolder.Desktop
f.DrawWideIconMBS(g,listbox1.left,listbox1.top+row*20,16)
Return true
End Function

Notes: Try this in a listbox. The Graphics object there has a cliping and an offset which the plugin doesn't know about.

6.0.217 I'm searching for a method or so to move a window from position x.y to somewhere else on the screen.

Platform: macOS.

Answer:

The code I produced in RB isn't smooth enough. Is there a call in MBS, if not, can it be done? The speed of it has to be like the show of a DrawerWindow.

Try the declare below for Carbon. With WindowLib it will work on Mac OS 8.5 and newer.
Notes:

See Window.Transition functions.

6.0.218 If I use one of your plug-ins under windows, would this then impose the use of dll after compilation or my would my compiled soft still be a stand-alone single file software?

Platforms: macOS, Linux, Windows.

Answer: Stand alone.
Notes: Xojo compiles all used plugins into the application binary.
Some plugin parts need external dlls but you will find that in the documentation. (e.g. pdflib for some classes)

6.0.219   Is the fn key on a powerbook keyboard down?

Plugin Version: all, Platform: macOS.

Answer: I am unable to figure out how or if it is possible to detect if the fn key is down on a powerbook keyboard. Is it possible?
Example:

' Window.Open Event of a blank project:

dim i as Integer

for i=0 to 127
if keyboard.asynckeydown(i) then
title=str(i) // found
return
end if
next
title="" // not found

Notes: This test application shows the keycode (decimal) 63 for the fn key.

6.0.220   Is there a case sensitive Dictionary?

Plugin Version: all.

Answer: The MBS Plugin has several classes which can work as a replacement.
Notes: First you could use VariantToVariantHashMapMBS or VariantToVariantOrderedMapMBS.
If you know that all keys are Strings or Integers only, you can use the specialized classes which are a little bit faster due to avoiding variants:

IntegerToIntegerHashMapMBS class
IntegerToIntegerOrderedMapMBS class
IntegerToStringHashMapMBS class
IntegerToStringOrderedMapMBS class
IntegerToVariantHashMapMBS class
IntegerToVariantOrderedMapMBS class
StringToStringHashMapMBS class
StringToStringOrderedMapMBS class
StringToVariantHashMapMBS class
StringToVariantOrderedMapMBS class

6.0.221 Is there a way to use the MBS plugin to get only the visible item and folder count on a volume?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use the DirectorySizeMBS class for this as in the example below:
Example:

```
dim d as DirectorySizeMBS

d=new DirectorySizeMBS

// volume(1) as my boot volume is very full
if d.update(volume(1),true,0) then
MsgBox str(d.VisibleItemCount)+" visible items, "+str(d.HiddenItemCount)+" invisible items."
end if
```

Notes: Complete Question: Is there a way to use the MBS plugin to get only the visible item and folder count on a volume? The FileCount and FolderCount properties of VolumeInformationMBS seem to provide the total # of items including invisible items such as .DS_Store and more importantly .Trashes which is causing me a great amount of difficulty during a recursive scan of a volume. I've got a progress bar which uses the total of the filecount and foldercount properties as the maximum value, but my routine needs to filter out all invisible items, as it is creating a catalog of a volume for archiving purposes. Any thoughts how I could get accurate number.

6.0.222 Is there an easy way I can launch the Displays preferences panel?

Plugin Version: all, Platform: macOS.

Answer: Use the code below:
Example:

```
dim error as Integer

error=OpenMacOSXPreferencesPaneMBS("Displays")
if error<>0 then
MsgBox "Failed to launch QuickTime System Preferences panel."
end if
```

6.0.223   List of Windows Error codes?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: We have a list of windows error codes on our website.
Notes: http://www.monkeybreadsoftware.de/xojo/winerror.shtml

6.0.224   Midi latency on Windows problem?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: The issue is system related, not a problem with RB or the plugin.
Notes: Two things will adversely affect the timing:

(1) latency of the software synthesizer output driver. The default Windows wavetable synthesizer has considerable latency. I don't know how many milliseconds, but it is noticeable.

(2) latency of the digital audio output driver. Different systems have different drivers for different audio hardware. My Dell laptop has a minimum 15ms latency in the audio driver.

These two things put together were causing a very sluggish MIDI response. I was able to verify these as the culprits by routing MIDI directly out of RB into a sample player, which only introduces the latency of (2) and does not include latency of (1).

I don't know how widely known are these facts, if not then you may want to add this information to the documentation, since Windows programmers using the MIDI plugin may not know those problems, and might mistakenly blame your plugin, as I did :) Sorry about that!

(From Aaron Andrew Hunt)

6.0.225   My Xojo Web App does not launch. Why?

Plugin Version: all, Platform: macOS.

Answer: Here is a list of checks to do for linux apache installations with Xojo or Xojo Web applications:
Notes: Just a list of checks to do for linux apache installations:

- You have 64bit linux? Than you need 32 bit compatibility libraries.
- The folder of your app is writable? Set permissions to 777.
- The cgi script is executable? Set permissions to 755.

- The app file itself is executable? Set permissions to 755.

- You uploaded cgi file as text, so it has unix line endings? (this often gives error "Premature end of script headers" in apache log)

- You uploaded config.cfg file and made it writable? Set permissions to 666.

- Your apache allows execution of cgi scripts? You enabled cgi for apache and uncommented addhandler command for CGI on a new apache installation?

- You uploaded the app file and libraries as binary files? Upload as text breaks them.

- You did upload the libs folder?

- You don't have code in app.open, session.open and other events which crashes app right at launch?

- You don"t have a print command in your app.open event? (see feedback case 23817)

- You allowed htaccess file to overwrite permissions?

6.0.226   SQLDatabase not initialized error?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Before you can use SQLDatabaseMBS, it must be initialized.
Example:

dim d as new SQLDatabaseMBS

Notes: This happens normally when you use "new SQLDatabaseMBS".
But if you just have a SQLConnectionMBS and get a recordset there, the initialization may not have happend, yet.
So please simply add a line "dim d as new SQLDatabaseMBS" to your app.open code after registration, so the plugin part can initialize and late provide recordsets.

6.0.227   Textconverter returns only the first x characters. Why?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

Some older Xojo versions limit the Textconverter to around 1024 characters in input and output.
This should be fixed with RB5.
Notes:

Xojo seems not to support Textconverters at all on Windows.

6.0.228   The type translation between CoreFoundation/Foundation and Xojo data types.

Plugin Version: all, Platform: macOS.

Answer: The plugin does conversion between Cocoa/Carbon data types and native Xojo data types. The following list help you knowing what the current plugins support:
Notes: Cocoa NSObject to Variant:

nil ->nil
NSDictionary ->Dictionary
NSData ->MemoryBlock
NSString ->String
NSAttributedString ->NSAttributedStringMBS
NSDate ->Date
NSNumber ->double/integer/Int64/UInt64/UInt32/Boolean
NSURL ->String
NSValue with NSRect ->NSRectMBS
NSValue with NSPoint ->NSPointMBS
NSValue with NSSize ->NSSizeMBS
NSValue with NSRange ->NSRangeMBS
NSValue with QTTime ->QTTimeMBS
NSValue with QTTimeRange ->QTTimeRangeMBS
NSArray ->Array of Variant
QuartzFilter ->QuartzFilterMBS

- ->*MBS

Variant to Cocoa NSObject:

nil ->nil
Dictionary ->NSDictionary
Boolean ->NSNumber
Integer ->NSNumber
Color ->NSColor
Int64 ->NSNumber
Single ->NSNumber
Double ->NSNumber
Date ->NSDate
MemoryBlock ->NSData
String ->NSString
NSImageMBS ->NSImage
NSAttributedStringMBS ->NSAttributedString
NSColorMBS ->NSColor
NSRectMBS ->NSValue with NSRect
NSSizeMBS ->NSValue with NSSize

NSPointMBS ->NSValue with NSPoint
NSRangeMBS ->NSValue with NSRange
NSBurnMBS ->NSBurn
NSViewMBS ->NSView
NSFontMBS ->NSFont
NSParagraphStyleMBS ->NSParagraphStyle
NSAttributedStringMBS ->NSAttributedString
WebPolicyDelegateMBS ->WebPolicyDelegate
WebUIDelegateMBS ->WebUIDelegate
WebFrameLoadDelegateMBS ->WebFrameLoadDelegate
WebResourceLoadDelegateMBS ->WebResourceLoadDelegate
NSIndexSetMBS ->NSIndexSet
QTTimeMBS ->QTTime
QTTimeRangeMBS ->QTTimeRange
Array of Variant ->NSArray
Array of String ->NSArray
CFStringMBS ->NSString
CFNumberMBS ->NSNumber
CFDataMBS ->NSData
CFURLMBS ->NSURL
CFArrayMBS ->NSArray
CFDictionaryMBS ->NSDictionary
CFBinaryDataMBS ->NSDate

Carbon CFTypeRef to Variant:

CFDictionaryRef ->Dictionary
CFStringRef ->String
CFDataRef ->String
CFURL ->String
CFNumber ->Integer/Double/Int64
CFArray ->Array
CFDate ->date
nil ->nil
CGColorSpace ->CGColorSpaceMBS
CGColor ->CGColorMBS
CGImage ->CGImageMBS
CF* ->CF*MBS

Variant to Carbon CFTypeRef:

Dictionary ->CFDictionaryRef
Boolean ->CFBooleanRef
Color ->CFNumberRef
Integer ->CFNumberRef

Int64 ->CFNumberRef
Single ->CFNumberRef
Double ->CFNumberRef
String ->CFStringRef
Color ->CGColorRef
Date ->CFDateRef
nil ->nil
Memoryblock ->CFDataRef
FolderItem ->CFURLRef
Dictionary ->CFDictionaryRef
Array of Variant/String/Date/Double/Single/Int64/Integer ->CFArray
CGRectMBS ->CGRect as CFDataRef
CGSizeMBS ->CGSize as CFDataRef
CGPointMBS ->CGPoint as CFDataRef
CGColorMBS ->CGColor
CGColorSpaceMBS ->CGColorSpace
CGImageMBS ->CGImage
CGDataConsumerMBS ->CGDataConsumer
CGDataProviderMBS ->CGDataProvider
CF*MBS ->CF*

Strings without encodings should be put into dictionaries as memoryblocks.

6.0.229   Uploaded my web app with FTP, but it does not run on the server!

Plugin Version: all, Platform: Windows.

Answer: If you see errors like a simple "Segmentation Fault" on Linux or some other wired errors, you may want to check your FTP upload mode. It must be binary for web apps. ASCII mode corrupts the application.

6.0.230   What classes to use for hotkeys?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Please use CarbonHotKeyMBS class on Mac and WindowsKeyFilterMBS on Windows.
Notes: CarbonHotKeyMBS will also work fine in Cocoa apps.

6.0.231   What do I need for Linux to get picture functions working?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: In order to get our plugins working on Linux systems without GUI, the plugin loads graphics

libraries dynamically.

Notes: To get it working, the plugin tries to load gtk with this paths:

- libgtk-x11-2.0.so"

- libgtk-x11-2.0.so.0"

- /usr/lib/libgtk-x11-2.0.so"

- /usr/lib32/libgtk-x11-2.0.so"

- /usr/lib/libgtk-x11-2.0.so.0"

- /usr/lib32/libgtk-x11-2.0.so.0"

gdk is loaded with this paths:

- libgdk-x11-2.0.so"

- libgdk-x11-2.0.so.0"

- /usr/lib/libgdk-x11-2.0.so"

- /usr/lib32/libgdk-x11-2.0.so"

- /usr/lib/libgdk-x11-2.0.so.0"

- /usr/lib32/libgdk-x11-2.0.so.0"

For the paths without explicit path, the system will search in /lib, /usr/lib and all directories in the LD_LI-BRARY_PATH environment variable.

6.0.232 What does the NAN code mean?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

6.0.233 What font is used as a 'small font' in typical Mac OS X apps?

Plugin Version: all, Platform: macOS.

Answer:

Xojo 4.5 has a constant "SmallSystem" to use for a font name.
For older versions try this code:
Example:

```
Sub GetThemeFont(fontType as Integer, ByRef fontName as String, ByRef fontSize as Integer, ByRef
fontStyle as Integer)
dim err as Integer
dim theFont, theFontSize, theFontStyle as MemoryBlock

const smSystemScript = -1

Declare Function GetThemeFont Lib "Carbon" (inFontID as Integer, inScript as Integer, outFontName
as Ptr, outFontSize as Ptr, outStyle as Ptr) as Integer

theFont = NewMemoryBlock(256) //Str255
theFontSize = NewMemoryBlock(2) //SInt16
theFontStyle = NewMemoryBlock(1) //Style

err = GetThemeFont(fontType, smSystemScript, theFont, theFontSize, theFontStyle)

if err = 0 then
fontName = theFont.PString(0)
fontSize = theFontSize.UShort(0)
fontStyle = theFontStyle.Byte(0)
else
fontName = ""
fontSize = 0
fontStyle = 0
end if
End Sub
```

6.0.234   What is last plugin version to run on Mac OS X 10.4?

Plugin Version: all, Platform: Windows.

Answer: Last Version with 10.4 support is version 15.4.
Notes: With version 15.4 you can build applications for OS X 10.4 and newer.
For Version 16.0 we disabled 10.4 and moved minimum to 10.5. We may be able to enable it again to build
a version of 16.x, but may need to charge for this by hour.

6.0.235   What is last plugin version to run on PPC?

Plugin Version: all, Platform: Windows.

Answer: Last Version with PPC is 15.4.
Notes: With version 15.4 you can build PPC applications for OS X 10.4 and newer.
For Version 16.0 we disabled PPC. We may be able to enable it again to build a PPC version of 16.x, but
may need to charge for this by hour.

6.0.236   What is last version of the plugins for macOS 32-bit?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Please use version 23.0 or older.
Notes: We stopped including 32-bit code for macOS in version 23.1.
Please us older versions if you use an old Xojo.

Xojo 2017r3 and newer load our 64-bit plugins.

6.0.237   What is the difference between Timer and WebTimer?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Time is server side and WebTimer client side.
Notes: Timer is the normal timer class in Xojo. It runs on the server. On the side the WebTimer runs on the client. It triggers a request to the server to perform the action. So a WebTimer is good to keep the connection running and the website updated regularly. A timer on the server is good to make regular jobs like starting a database backup every 24 hours.

6.0.238   What is the list of Excel functions?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Below a list of function names known by LibXL.
Notes: LibXL parses the functions and writes tokens to the excel file. So even if Excel can do more functions, we can only accept the ones known by LibXL.

ABS, ABSREF, ACOS, ACOSH, ACTIVE.CELL, ADD.BAR, ADD.COMMAND, ADD.MENU, ADD.TOOL-BAR, ADDRESS, AND, APP.TITLE, AREAS, ARGUMENT, ASC, ASIN, ASINH, ATAN, ATAN2, ATANH, AVEDEV, AVERAGE, AVERAGEA, BAHTTEXT, BETADIST, BETAINV, BINOMDIST, BREAK, CALL, CALLER, CANCEL.KEY, CEILING, CELL, CHAR, CHECK.COMMAND, CHIDIST, CHIINV, CHITEST, CHOOSE, CLEAN, CODE, COLUMN, COLUMNS, COMBIN, CONCATENATE, CONFIDENCE, COR-REL, COS, COSH, COUNT, COUNTA, COUNTBLANK, COUNTIF, COVAR, CREATE.OBJECT, CRIT-BINOM, CUSTOM.REPEAT, CUSTOM.UNDO, DATE, DATEDIF, DATESTRING, DATEVALUE, DAV-ERAGE, DAY, DAYS360, DB, DBCS, DCOUNT, DCOUNTA, DDB, DEGREES, DELETE.BAR, DELETE.COM-MAND, DELETE.MENU, DELETE.TOOLBAR, DEREF, DEVSQ, DGET, DIALOG.BOX, DIRECTORY, DMAX, DMIN, DOCUMENTS, DOLLAR, DPRODUCT, DSTDEV, DSTDEVP, DSUM, DVAR, DVARP, ECHO, ELSE, ELSE.IF, ENABLE.COMMAND, ENABLE.TOOL, END.IF, ERROR, ERROR.TYPE, EVAL-UATE, EVEN, EXACT, EXEC, EXECUTE, EXP, EXPONDIST, FACT, FALSE, FCLOSE, FDIST, FILES, FIND, FINDB, FINV, FISHER, FISHERINV, FIXED, FLOOR, FOPEN, FOR, FOR.CELL, FORECAST,

FORMULA.CONVERT, FPOS, FREAD, FREADLN, FREQUENCY, FSIZE, FTEST, FV, FWRITE, FWRITELN, GAMMADIST, GAMMAINV, GAMMALN, GEOMEAN, GET.BAR, GET.CELL, GET.CHART.ITEM, GET.DEF, GET.DOCUMENT, GET.FORMULA, GET.LINK.INFO, GET.MOVIE, GET.NAME, GET.NOTE, GET.OBJECT, GET.PIVOT.FIELD, GET.PIVOT.ITEM, GET.PIVOT.TABLE, GET.TOOL, GET.TOOL-BAR, GET.WINDOW, GET.WORKBOOK, GET.WORKSPACE, GETPIVOTDATA, GOTO, GROUP, GROWTH, HALT, HARMEAN, HELP, HLOOKUP, HOUR, HYPERLINK, HYPGEOMDIST, IF, IN-DEX, INDIRECT, INFO, INITIATE, INPUT, INT, INTERCEPT, IPMT, IRR, ISBLANK, ISERR, ISER-ROR, ISLOGICAL, ISNA, ISNONTEXT, ISNUMBER, ISPMT, ISREF, ISTEXT, ISTHAIDIGIT, KURT, LARGE, LAST.ERROR, LEFT, LEFTB, LEN, LENB, LINEST, LINKS, LN, LOG, LOG10, LOGEST, LOGINV, LOGNORMDIST, LOOKUP, LOWER, MATCH, MAX, MAXA, MDETERM, MEDIAN, MID, MIDB, MIN, MINA, MINUTE, MINVERSE, MIRR, MMULT, MOD, MODE, MONTH, MOVIE.COM-MAND, N, NA, NAMES, NEGBINOMDIST, NEXT, NORMDIST, NORMINV, NORMSDIST, NORM-SINV, NOT, NOTE, NOW, NPER, NPV, NUMBERSTRING, ODD, OFFSET, OPEN.DIALOG, OP-TIONS.LISTS.GET, OR, PAUSE, PEARSON, PERCENTILE, PERCENTRANK, PERMUT, PHONETIC, PI, PIVOT.ADD.DATA, PMT, POISSON, POKE, POWER, PPMT, PRESS.TOOL, PROB, PRODUCT, PROPER, PV, QUARTILE, RADIANS, RAND, RANK, RATE, REFTEXT, REGISTER, REGISTER.ID, RELREF, RENAME.COMMAND, REPLACE, REPLACEB, REPT, REQUEST, RESET.TOOLBAR, RESTART, RESULT, RESUME, RETURN, RIGHT, RIGHTB, ROMAN, ROUND, ROUNDBAHTDOWN, ROUND-BAHTUP, ROUNDDOWN, ROUNDUP, ROW, ROWS, RSQ, RTD, SAVE.DIALOG, SAVE.TOOLBAR, SCENARIO.GET, SEARCH, SEARCHB, SECOND, SELECTION, SERIES, SET.NAME, SET.VALUE, SHOW.BAR, SIGN, SIN, SINH, SKEW, SLN, SLOPE, SMALL, SPELLING.CHECK, SQRT, STANDARD-IZE, STDEV, STDEVA, STDEVP, STDEVPA, STEP, STEYX, SUBSTITUTE, SUBTOTAL, SUM, SUMIF, SUMPRODUCT, SUMSQ, SUMX2MY2, SUMX2PY2, SUMXMY2, SYD, T, TAN, TANH, TDIST, TER-MINATE, TEXT, TEXT.BOX, TEXTREF, THAIDAYOFWEEK, THAIDIGIT, THAIMONTHOFYEAR, THAINUMSOUND, THAINUMSTRING, THAISTRINGLENGTH, THAIYEAR, TIME, TIMEVALUE, TINV, TODAY, TRANSPOSE, TREND, TRIM, TRIMMEAN, TRUE, TRUNC, TTEST, TYPE, UNREG-ISTER, UPPER, USDOLLAR, USERDEFINED, VALUE, VAR, VARA, VARP, VARPA, VDB, VIEW.GET, VLOOKUP, VOLATILE, WEEKDAY, WEIBULL, WHILE, WINDOW.TITLE, WINDOWS, YEAR and ZTEST.

6.0.239   What is the replacement for PluginMBS?

Plugin Version: all, Platform: macOS.

Answer: Use the SoftDeclareMBS class to load libraries dynamically.

6.0.240   What to do on Xojo reporting a conflict?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

I get an error like "This item conflicts with another item of the same name" when using one of the plugin functions.

Xojo just wants to tell you that you dropped something in the plugins folder what is not a plugin.
Notes:

Some users dropped the examples, the documentation or other files into the plugins folder. Don't do it.

6.0.241   What to do with a NSImageCacheException?

Plugin Version: all, Platforms: macOS, Windows.

Answer: You need to add exception handlers for NSExceptionMBS in order to catch this exception.
Notes: You may also add code to write the stack of the exception into a log file for later locating the error source.

A NSImage has several image representations in memory. So basicly you pass in the base image and for whatever size an image is needed, the NSImage class will create a cache image representation of the requested size so on the next query it can use that cache for the same requested size.

6.0.242   What to do with MySQL Error 2014?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can get this error on MySQL if you have a recordset open while you create another one.

6.0.243   What to do with SQL Plugin reporting Malformed string as error?

Plugin Version: all, Platform: macOS.

Answer: Please make sure the table and/or database fields have a text encoding set.
Notes: For Firebird our plugin tries to use UTF-8 encoding if possible and to correctly convert between various tables, the tables and their fields need to have a text encoding defined.
e.g. if the text field in the table is windows-1252 and the other ISO 8859-5, then the Firebird database can convert them to UTF-8 and deliver texts to the plugin.
If encoding is set to none, it may get confused for non-ascii text.

6.0.244   Where is CGGetActiveDisplayListMBS?

Plugin Version: all, Platform: Windows.

Answer: This is now CGDisplayMBS.GetActiveDisplayList.

6.0.245 Where is CGGetDisplaysWithPointMBS?

Plugin Version: all, Platform: Windows.

Answer: This is now CGDisplayMBS.GetDisplaysWithPoint.

6.0.246 Where is CGGetDisplaysWithRectMBS?

Plugin Version: all, Platform: Windows.

Answer: This is now CGDisplayMBS.GetDisplaysWithRect.

6.0.247 Where is CGGetOnlineDisplayListMBS?

Plugin Version: all, Platform: Windows.

Answer: This is now CGDisplayMBS.GetOnlineDisplayList.

6.0.248 Where is GetObjectClassNameMBS?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Please use this replacement method:
Example:

Function GetObjectClassNameMBS(o as Object) As string
dim t as Introspection.TypeInfo = Introspection.GetType(o)
Return t.FullName
End Function

Notes: GetObjectClassNameMBS was removed from the plugins.

6.0.249 Where is NetworkAvailableMBS?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: We removed NetworkAvailableMBS some versions ago. It was not working right and basicly it's not useful. If you want to check whether you have a network, than do a DNS resolve:
Example:

```
// two independend domain names
const domain1 = "www.google.com"
const domain2 = "www.macsw.de"

// resolve IPs
dim ip1 as string = DNSNameToAddressMBS(Domain1)
dim ip2 as string = DNSNameToAddressMBS(Domain2)

// if we got IPs and not the same IPs (error/login pages)
if len(ip1)=0 or len(ip2)=0 or ip1=ip2 then
MsgBox "no connection"
else
MsgBox "have connection"
end if
```

Notes: This way you can detect whether you got something from DNS. And you can make sure that a DNS redirection to a login page won't catch you.

6.0.250 Where is StringHeight function in DynaPDF?

Plugin Version: all, Platform: Windows.

Answer: Use the function GetFTextHeight or GetFTextHeightEx.
Notes: Be aware that GetFTextHeight works with format commands and you may want to escape your text if you don't use them.

6.0.251 Where is XLSDocumentMBS class?

Plugin Version: all, Platform: macOS.

Answer: This class has been removed in favor of XLBookMBS class.
Notes: This classes have been removed XLSCellMBS, XLSDocumentMBS, XLSFormatRecordMBS, XLSMerged-CellsMBS, XLSRowMBS and XLSSheetMBS.

6.0.252 Where to get information about file formats?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

Please visit this web page:
http://www.wotsit.org

6.0.253   Where to register creator code for my application?

Plugin Version: all, Platform: macOS.

Answer:

Register at Apple:
http://developer.apple.com/dev/cftype/information.html

6.0.254   Which Mac OS X frameworks are 64bit only?

Plugin Version: all, Platform: macOS.

Answer: Some frameworks from Mac OS X do not support 32 bit applications, so we can't provide plugins for Xojo until 64bit target is available.
Notes: For Mac OS X 10.8:

- Accounts
- EventKit
- GLKit
- Social

and in 10.9:

- Accounts
- AVKit
- EventKit
- GameController
- GLKit
- MapKit
- MediaLibrary
- Social
- SpriteKit

In general Apple makes all new frameworks being 64 bit only.

6.0.255 Which plugins are 64bit only?

Plugin Version: all, Platform: macOS.

Answer: Some of our plugins work only in 64 bit modes as operation systems do not provide 32 bit code.
Notes: This effects currently: EventKit, Accounts, Social frameworks from Apple and our matching plugins.

6.0.256 Why application doesn't launch because of a missing ddraw.dll!?

Plugin Version: all, Platform: Windows.

Answer: Some RB versions require that you install DirectX from Microsoft on your Windows.

6.0.257 Why application doesn't launch because of a missing shlwapi.dll!?

Plugin Version: all, Platform: Windows.

Answer: Some RB versions require that you install the Internet Explorer from Microsoft on your Windows.
Notes: This bug is for several older Windows 95 editions.

6.0.258 Why do I hear a beep on keydown?

Plugin Version: all, Platform: Windows.

Answer: When the user presses a key, RB goes through all keydown event handlers till on returns true.
Notes: If no keydown event handler returns true for the key, a beep is performed.

6.0.259 Why does folderitem.item return nil?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Because Xojo fails to make a folderitem for you. Reason may be an alias file which can't be resolved or simply that you don't have enough access rights to read the folder content.
Notes: A more rarely reason is that the directory changed and the file with the given index or name does no longer exist.

6.0.260 Why doesn't showurl work?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

There are three main reasons:

1. showurl is not supported by Xojo in 68k applications.
2. there is now application defined for the protocol (e.g. http) in the Internet Control panel.
3. You don't have Internet Config installed.

You can use the InternetConfigMBS class to check for this stuff.

6.0.261   Why don't the picture functions not work on Linux?

Plugin Version: all, Platform: macOS.

Answer: Please make sure libcairo is installed.
Notes: For accessing pictures on Linux, the MBS Plugin relays on the cairo library.
Please install the package if you don't have it already.
Our plugin looks for library called libcairo.so or libcairo.so.2.

6.0.262   Why have I no values in my chart?

Plugin Version: all, Platforms: macOS, Windows.

Answer: You have no data points visible, there may be several reasons:
Notes: For example one of the data values may be infinite or invalid.
Or the scaling may be out of range, so you simply see nothing.

6.0.263   Will application size increase with using plugins?

Plugin Version: all, Platform: Windows.

Answer: All plugins used by your application will be included in the application.
Notes: If you use no plugins, your application will not change size.
And if you use one class from the plugins, your application size will increase by a few kilobytes.
The documentation of the plugins include a list of all plugin parts and their sizes for the different platforms.

6.0.264   XLS: Custom format string guidelines

Plugin Version: all, Platform: macOS.

Answer: You have to download the source code and compile a static version of the library.

Notes: Up to four sections of format codes can be specified. The format codes, separated by semicolons, define the formats for positive numbers, negative numbers, zero values, and text, in that order. If only two sections are specified, the first is used for positive numbers and zeros, and the second is used for negative numbers. If only one section is specified, it is used for all numbers. Four sections example:

#,###.00_); [Red] (#,###.00);0.00;"sales "@

The following table describes the different symbols that are available for use in custom number formats.

Specify colors

To set the text color for a section of the format, type the name of one of the following eight colors in square brackets in the section. The color code must be the first item in the section.

Instead of using the name of the color, the color index can be used, like this [Color3] for Red. Valid numeric indexes for color range from 1 to 56, which reference by index to the legacy color palette.

Specify conditions

To set number formats that will be applied only if a number meets a specified condition, enclose the condition in square brackets. The condition consists of a comparison operator and a value. Comparison operators include: = Equal to; >Greater than; <Less than; >= Greater than or equal to, <= Less than or equal to, and <>Not equal to. For example, the following format displays numbers that are less than or equal to 100 in a red font and numbers that are greater than 100 in a blue font.

[Red] [<=100] ; [Blue] [>100]

If the cell value does not meet any of the criteria, then pound signs ("#") are displayed across the width of the cell.

Dates and times

Examples

6.0.265 Xojo doesn't work with your plugins on Windows 98.

Plugin Version: all, Platform: Windows.

Answer: Please upgrade your Windows version.

6.0.266   Xojo or my RB application itself crashes on launch on Mac OS Classic. Why?

Plugin Version: all.

Answer:

You may check if the application has enough memory to be loaded.
RB should have on Mac OS Classic more than 20 MB of RAM.
I prefered to use 50 MB and for an application a 10 MB partition is a good way to start.

Parameter	Description
x	The x value of the data point. For an enumerated x-axis (see Axis.setLabels on what is an enumerated axis), the first data point is 0, and the nth data point is (n-1).
xLabel	The bottom x-axis label of the data point.
x2Label	The top x-axis label of the data point.
value	The value of the data point.
accValue	The sum of values of all data points that are in the same x position and same data group as the current data point, and with data set number less than or equal to the current data point. This is useful for stacked charts, such as stacked bar chart and stacked area chart.
totalValue	The sum of values of all data points that are in the same x position and same data group as the current data point. This is useful for stacked charts, such as stacked bar chart and stacked area chart.
percent	The percentage of the data point based on the total value of all data points that are in the same x position and same data group as the current data point. This is useful for stacked charts, such as stacked bar chart and stacked area chart.
accPercent	The accumulated percentage of the data point based on the total value of all data points that are in the same x position and same data group as the current data point. This is useful for stacked charts, such as stacked bar chart and stacked area chart.
gpercent	The percentage of the data point based on the total value of all data points in a layer.
dataSet	The data set number to which the data point belongs. The first data set is 0. The nth data set is (n-1).
dataSetName	The name of the data set to which the data point belongs.
dataItem	The data point number within the data set. The first data point is 0. The nth data point is (n-1).
dataGroup	The data group number to which the data point belongs. The first data group is 0. The nth data group is (n-1).
dataGroupName	The name of the data group to which the data point belongs.
layerId	The layer number to which the data point belongs. The first layer is 0. The nth layer is (n-1).
fieldN	The (N + 1)th extra field. For example, { field0 } means the first extra field. An extra field is an array of custom elements added using Layer.addExtraField, Layer.addExtraField2, BaseChart.addExtraField or BaseChart.addExtraField2.

diFieldN	Same as fieldN. See above.
dsFieldN	Similar to fieldN, except that dsFieldN means the extra field is indexed by data set number. The Pth data set corresponds to the Pth element of the extra field.
dsdiFieldN	Similar to fieldN, except that dsdiFieldN means the extra fields are indexed by both the data set number and data point number. The Pth data item of the Qth data set corresponds to the Pth element of the (N + Q)th extra field.

Parameter	Description
zx	The symbol scale in the x dimension. Applicable for layers with symbol scales set by LineLayer.setSymbolScale.
zy	The symbol scale in the y dimension. Applicable for layers with symbol scales set by LineLayer.setSymbolScale.
z	The symbol scale without distinguishing the dimension to use. Applicable for layers with symbol scales set by LineLayer.setSymbolScale.

Parameter	Description
slope	The slope of the trend line.
intercept	The y-intercept of the trend line.
corr	The correlation coefficient in linear regression analysis.
stderr	The standard error in linear regression analysis.

Parameter	Description
top	The value of the top edge of the box-whisker symbol.
bottom	The value of the bottom edge of the box-whisker symbol.
max	The value of the maximum mark of the box-whisker symbol.
min	The value of the minimum mark of the box-whisker symbol.
med	The value of the median mark of the box-whisker symbol.

Parameter	Description
high	The high value.
low	The low value.
open	The open value.
close	The close value.

Parameter	Description
dir	The direction of the vector.
len	The length of the vector.

Parameter	Description
radius	The radial value of the data point.
value	Same as { radius } . See above.
angle	The angular value of the data point.
x	Same as { angle } . See above.
label	The angular label of the data point.
xLabel	Same as { label } . See above.
name	The name of the layer to which the data point belongs.
dataSetName	Same as { name } . See above.
i	The data point number. The first data point is 0. The nth data point is (n-1).
dataItem	Same as { i } . See above.
z	The symbol scale. Applicable for layers with symbol scales set by PolarLayer.setSymbolScale.
fieldN	The (N + 1)th extra field. For example, { field0 } means the first extra field. An extra field is an array of custom elements added using Layer.addExtraField, Layer.addExtraField2, BaseChart.addExtraField or BaseChart.addExtraField2.

diFieldN	Same as fieldN. See above.
dsFieldN	Similar to fieldN, except that dsFieldN means the extra field is indexed by layer index. The Pth layer corresponds to the Pth element of the extra field.
dsdiFieldN	Similar to fieldN, except that dsdiFieldN means the extra fields are indexed by both the data set number and data point number. The Pth data item of the Qth layer corresponds to the Pth element of the (N + Q)th extra field.

Parameter	Description
dir	The direction of the vector.
len	The length of the vector.

Parameter	Description
value	The axis value at the tick position.
label	The axis label at the tick position.

Parameter	Description
[param]	The name of the parameter
[a]	If this field a number, it specifies the number of decimal places (digits to the right of the decimal point).

[b]

textasciitilde ' for no thousand separator. The default is '
textasciitilde ', which can be modified using BaseChart.setNumberFormat.

[c]

[d]
textasciitilde ' for no negative sign character. The default is '-', which can be modified using BaseChart.setNumberFormat.

The thousand separator. Should be a non-alphanumeric character (not 0-9, A-Z, a-z). Use '

The decimal point character. The default is '.', which can be modified using BaseChart.setNumberFormat.
The negative sign character. Use '

Parameter	Description
yyyy	The year in 4 digits (e.g. 2002)
yyy	The year showing only the least significant 3 digits (e.g. 002 for the year 2002)
yy	The year showing only the least significant 2 digits (e.g. 02 for the year 2002)
y	The year showing only the least significant 1 digits (e.g. 2 for the year 2002)
mmm	The month formatted as its name. The default is to use the first 3 characters of the english month name (Jan, Feb, Mar ...). The names can be configured using BaseChart.setMonthNames.
mm	The month formatted as 2 digits from 01 - 12, adding leading zero if necessary.
m	The month formatted using the minimum number of digits from 1 - 12.
MMM	The first 3 characters of the month name converted to upper case. The names can be configured using BaseChart.setMonthNames.
MM	The first 2 characters of the month name converted to upper case. The names can be configured using BaseChart.setMonthNames.
M	The first character of the month name converted to upper case. The names can be configured using BaseChart.setMonthNames.
dd	The day of month formatted as 2 digits from 01 - 31, adding leading zero if necessary.
d	The day of month formatted using the minimum number of digits from 1 - 31.
w	The name of the day of week. The default is to use the first 3 characters of the english day of week name (Sun, Mon, Tue ...). The names can be configured using BaseChart.setWeekDayNames.
hh	The hour of day formatted as 2 digits, adding leading zero if necessary. The 2 digits will be 00 - 23 if the 'a' option (see below) is not specified, otherwise it will be 01 - 12.
h	The hour of day formatted using the minimum number of digits. The digits will be 0 - 23 if the 'a' option (see below) is not specified, otherwise it will be 01 - 12.
nn	The minute formatted as 2 digits from 00 - 59, adding leading zero if necessary.
n	The minute formatted using the minimum number of digits from 00 - 59.
ss	The second formatted as 2 digits from 00 - 59, adding leading zero if necessary.
s	The second formatted using the minimum number of digits from 00 - 59.
a	Display either 'am' or 'pm', depending on whether the time is in the morning or afternoon. The text 'am' and 'pm' can be modified using BaseChart.setAMPM.

Shape Id	Value	Description
SquareShape	1	Square shape. See (1, 1) above.
DiamondShape	2	Diamond shape. See (2, 1) above.
TriangleShape	3	Triangle shape pointing upwards. See (3, 1) above.
RightTriangleShape	4	Triangle shape pointing rightwards. See (4, 1) above.
LeftTriangleShape	5	Triangle shape pointing leftwards. See (5, 1) above.
InvertedTriangleShape	6	Triangle shape pointing downwards. See (1, 2) above.
CircleShape	7	Circle shape. See (2, 2) above.
StarShape	[Method]	Star shapes of various points. See (2, 3), (2, 4), (2, 5), (3, 1), (3, 2), (3, 3), (3, 4), (3, 5) above for stars with 3 to 10 points.
PolygonShape	[Method]	Polygon shapes symmetrical about a vertical axis with a vertex at the top center position. See (4, 1), (4, 3), (4, 5), (5, 1) for polygons of 5 to 8 sides.
Polygon2Shape	[Method]	Polygon shapes symmetrical about a vertical axis but without any vertex at the top center position. See (4, 2), (4, 4) for polygons of 5 and 6 sides.
CrossShape	[Method]	'+' shapes. See (5, 2), (5, 3), (5, 4), (5, 5), (6, 1), (6, 2), (6. 3) for '+' shape with arm width of 0.1 - 0.7.
Cross2Shape	[Method]	'X' shapes. See (6, 4), (6, 5), (7, 1), (7, 2), (7, 3), (7, 4), (7, 5) for 'X' shapes with arm width of 0.1 - 0.7.

langEnglish	0	Roman script
langFrench	1	Roman script
langGerman	2	Roman script
langItalian	3	Roman script
langDutch	4	Roman script
langSwedish	5	Roman script
langSpanish	6	Roman script
langDanish	7	Roman script
langPortuguese	8	Roman script
langNorwegian	9	Roman script
langHebrew	10	Hebrew script
langJapanese	11	Japanese script
langArabic	12	Arabic script
langFinnish	13	Roman script
langGreek	14	Greek script using smRoman script code
langIcelandic	15	modified smRoman/Icelandic script
langMaltese	16	Roman script
langTurkish	17	modified smRoman/Turkish script
langCroatian	18	modified smRoman/Croatian script
langTradChinese	19	Chinese (Mandarin) in traditional characters
langUrdu	20	Arabic script
langHindi	21	Devanagari script
langThai	22	Thai script
langKorean	23	Korean script

Nan	Meaning
1	Invalid square root (negative number, usually)
2	Invalid addition (indeterminate such as infinity + (-infinity))
4	Invalid division (indeterminate such as 0/0)
8	Invalid multiplication (indeterminate such as 0*infinity)
9	Invalid modulo such as (a mod 0)
17	Try to convert invalid string to a number like val("x7")
33	Invalid argument in a trig function
34	Invalid argument in an inverse trig function
36	Invalid argument in a log function
37	Invalid argument in Pow function
38	Invalid argument in toolbox financial function
40	Invalid argument in hyperbolic function
42	Invalid argument in a gamma function

Symbol	Description and result
0	Digit placeholder. For example, if the value 8.9 is to be displayed as 8.90, use the format #.00
#	Digit placeholder. This symbol follows the same rules as the 0 symbol. However, the application shall not display extra zeros when the number typed has fewer digits on either side of the decimal than there are # symbols in the format. For example, if the custom format is #.##, and 8.9 is in the cell, the number 8.9 is displayed.
?	Digit placeholder. This symbol follows the same rules as the 0 symbol. However, the application shall put a space for insignificant zeros on either side of the decimal point so that decimal points are aligned in the column. For example, the custom format 0.0? aligns the decimal points for the numbers 8.9 and 88.99 in a column.
. (period)	Decimal point.
%	Percentage. If the cell contains a number between 0 and 1, and the custom format 0% is used, the application shall multiply the number by 100 and adds the percentage symbol in the cell.
, (comma)	Thousands separator. The application shall separate thousands by commas if the format contains a comma that is enclosed by number signs (#) or by zeros. A comma that follows a placeholder scales the number by one thousand. For example, if the format is #.0,, and the cell value is 12,200,000 then the number 12.2 is displayed.
E- E+ e- e+	Scientific format. The application shall display a number to the right of the "E" symbol that corresponds to the number of places that the decimal point was moved. For example, if the format is 0.00E+00, and the value 12,200,000 is in the cell, the number 1.22E+07 is displayed. If the number format is #0.0E+0, then the number 12.2E+6 is displayed.
$ -+/():space	Displays the symbol. If it is desired to display a character that differs from one of these symbols, precede the character with a backslash (\). Alternatively, enclose the character in quotation marks. For example, if the number format is (000), and the value 12 is in the cell, the number (012) is displayed.
\	Display the next character in the format. The application shall not display the backslash. For example, if the number format is 0\!, and the value 3 is in the cell, the value 3! is displayed.
*	Repeat the next character in the format enough times to fill the column to its current width. There shall not be more than one asterisk in one section of the format. If more than one asterisk appears in one section of the format, all but the last asterisk shall be ignored. For example, if the number format is 0*x, and the value 3 is in the cell, the value 3xxxxxx is displayed. The number of x characters that are displayed in the cell varies based on the width of the column.
_ (underline)	Skip the width of the next character. This is useful for lining up negative and positive values in different cells of the same column. For example, the number format _(0.0_);(0.0) aligns the numbers 2.3 and -4.5 in the column even though the negative number is enclosed by parentheses.
"text"	Display whatever text is inside the quotation marks. For example, the format 0.00 "dollars" displays 1.23 dollars when the value 1.23 is in the cell.
@	Text placeholder. If text is typed in the cell, the text from the cell is placed in the format where the at symbol (@) appears. For example, if the number format is "Bob "@" Smith" (including quotation marks), and the value "John" is in the cell, the value Bob John Smith is displayed.

[Black]   [Green]   [White]   [Blue]   [Magenta]   [Yellow]   [Cyan]   [Red]

To display	As	Use this code
Months	1-12	m
Months	01-12	mm
Months	Jan-Dec	mmm
Months	January-December	mmmm
Months	J-D	mmmmm
Days	1-31	d
Days	01-31	dd
Days	Sun-Sat	ddd
Days	Sunday-Saturday	dddd
Years	00-99	yy
Years	1900-9999	yyyy
Hours	0-23	h
Hours	00-23	hh
Minutes	0-59	m
Minutes	00-59	mm
Seconds	0-59	s
Seconds	00-59	ss
Time	4 AM	h AM/PM
Time	4:36 PM	h:mm AM/PM
Time	4:36:03 P	h:mm:ss A/P
Time	4:36:03.75	h:mm:ss.00
Elapsed time	1:02	[h] :mm
Elapsed time	62:16	[mm] :ss
Elapsed time	3735.80	[ss] .00

To display	As	Use this code
1234.59	1234.6	####.#
8.9	8.900	#.000
.631	0.6	0.#
12	12.0	#.0#
1234.568	1234.57	#.0#
44.398	44.398	???.???
102.65	102.65	???.???
2.8	2.8	???.???
5.25	5 1/4	# ??/??
5.3	5 3/10	# ??/??
12000	12,000	#,###
12000	12	#,
12400000	12.4	0.0,,