A Guide to Aquator

4 Annotations

Version 4.2

Oxford Scientific Software Ltd

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Contents

Annotations

What is an Annotation?

An annotation is a particular type of Aquator component which is used for annotating the schematic. As such, the only attributes that annotations possess are Properties and Interfaces.

Standard Annotations

The following is a list of the standard Aquator components used for annotation of the schematic.

 Line

 Picture

 Shape

 Text

Line

A Line is a schematic annotation component. An example is given below:

A Line can be drawn with user specified attributes, including the option of an arrowhead. Length and direction can also be changed.

If the *Show name* property is set to *True*, the name of the Line (which can be any string) is also shown.

Connectors

Annotation components cannot connect to other components.

Properties

A component only has one set of properties. Properties do not change during a model run.

Group	Name
Component	Display Name
	Draw order
Options	Show name
Schematic	Left
	Top
	Width
	Height
	Name X
	Name Y
	Angle
Draw	Line attributes
Arrow	Head
	Angle
	Size
Shell	Caption

Group	Name
	Path
	Arguments

Parameters

There are no parameters for annotation components.

States

There are no states for annotation components.

Variables

There are no variables for annotation components.

Sequences

There are no sequences for for annotation components.

Constraints

Annotation components do not have constraints attached.

Groups

Annotation components cannot be included in a group.

Interfaces

An interface defines a fixed set of instructions to which the component responds. During this response by the component, it is possible for the VBA programmer to modify this response to customise the way model operates.

Name
IBaseObject
ISchematicObject

Resource State

Annotation components do not have a resource state of their own.

Status level

Annotation components do not report resource state.

Picture

A Picture component is a schematic annotation object. An example is given below:

Craig Goch

A Picture placed on the schematic can show any picture imported onto the database. Pictures can be resized by resizing the Picture component in the same way as other components can be resized. This is achieved by selecting the Picture and dragging the square grab handles. Resizing can be *Istropic* (the original aspect ratio is maintained) or *Anisotropic* (the aspect ratio can change).

If the *Show name* property is set to *True*, the name of the Picture (which can be any string) is also shown, but in the standard schematic font as in the above example.

Connectors

Annotation components cannot connect to other components.

Properties

A component only has one set of properties. Properties do not change during a model run.

Group	Name
Component	Display Name
	Draw order
Options	Show name
Schematic	Left
	Top
	Width

Group	Name
	Height
	Name X
	Name Y
	Angle
Draw	Picture
	Resize mode
	Line attributes
Shell	Caption
	Path
	Arguments

Parameters

There are no parameters for annotation components.

States

There are no states for annotation components.

Variables

There are no variables for annotation components.

Sequences

There are no sequences for for annotation components.

Constraints

Annotation components do not have constraints attached.

Groups

Annotation components cannot be included in a group.

Interfaces

An interface defines a fixed set of instructions to which the component responds. During this response by the component, it is possible for the VBA programmer to modify this response to customise the way model operates.

Name
IBaseObject
ISymbol

Resource State

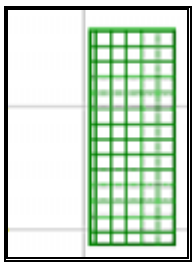
Annotation components do not have a resource state of their own.

Status level

Annotation components do not report resource state.

Shape

A Shape is a schematic annotation component. An example is given below:



A Shape can be drawn with user specified attributes of fill and border colour and style. Shapes can be rectangular or elliptical.

If the *Show name* property is set to *True*, the name of the Shape (which can be any string) is also shown.

Connectors

Annotation components cannot connect to other components.

Properties

A component only has one set of properties. Properties do not change during a model run.

Group	Name
Component	Display Name
	Draw order
Options	Show name
Schematic	Left
	Top

Group	Name
	Width
	Height
	Name X
	Name Y
	Angle
Draw	Shape
	Line attributes
	Fill attributes
Shell	Caption
	Path
	Arguments

Parameters

There are no parameters for annotation components.

States

There are no states for annotation components.

Variables

There are no variables for annotation components.

Sequences

There are no sequences for for annotation components.

Constraints

Annotation components do not have constraints attached.

Groups

Annotation components cannot be included in a group.

Interfaces

An interface defines a fixed set of instructions to which the component responds. During this response by the component, it is possible for the VBA programmer to modify this response to customise the way model operates.

Name
IBaseObject

Name
ISchematicObject

Resource State

Annotation components do not have a resource state of their own.

Status level

Annotation components do not report resource state.

Text

A Text component is a schematic annotation object. An example is given below:

A text string can be drawn with user specified attributes, including font style, colour and size. The text may also be placed in a rectangular, coloured, area with optional border. Only one line of text may be displayed per text component.

If the *Show name* property is set to *True*, the name of the text (which can be any string) is also shown, but in the standard schematic font.

Connectors

Annotation components cannot connect to other components.

Properties

A component only has one set of properties. Properties do not change during a model run.

Group	Name
Component	Display Name
	Draw order
Options	Show name
Schematic	Left
	Top
	Width
	Height

Group	Name
	Name X
	Name Y
	Angle
Draw	Text
	Font
	Line attributes
	Fill attributes
Shell	Caption
	Path
	Arguments

Parameters

There are no parameters for annotation components.

States

There are no states for annotation components.

Variables

There are no variables for annotation components.

Sequences

There are no sequences for for annotation components.

Constraints

Annotation components do not have constraints attached.

Groups

Annotation components cannot be included in a group.

Interfaces

An interface defines a fixed set of instructions to which the component responds. During this response by the component, it is possible for the VBA programmer to modify this response to customise the way model operates.

Name
IBaseObject
ISchematicObject

Resource State

Annotation components do not have a resource state of their own.

Status level

Annotation components do not report resource state.

Properties

A *Property* is a value for a Component which has no hydrological significance. For example, the co-ordinates of a Component on the schematic and the colours used to render the Component's icon.

Arrow.Head, Arrow.Angle and Arrow.Size

If *Arrow.Head* is set to *True*, an arrow head is drawn, otherwise it is not.

Arrow.Angle determines the angle of the arrow lines to that part of the Component containing the line.

Arrow.Size specifies the length of the arrow lines.

Component.Display name

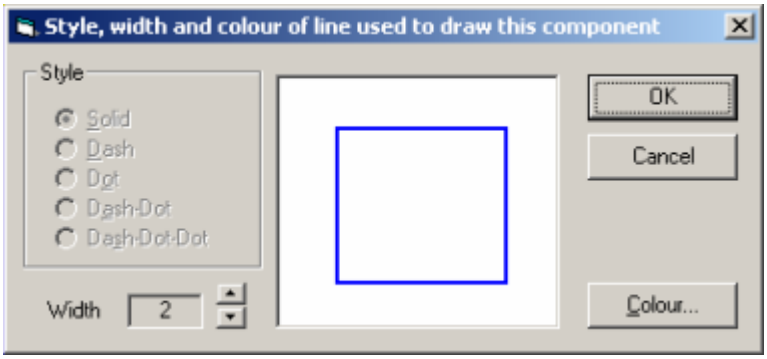
The name that appears on the schematic and other output. This name may be changed.

Component.Draw order

Reserved for future use.

Draw.[Line attributes]

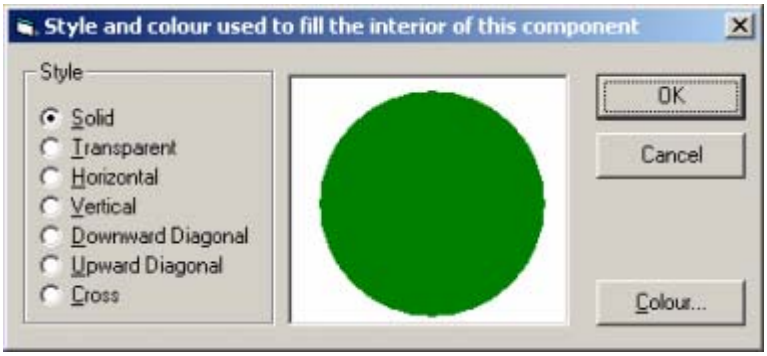
[Line attributes] may be replaced with a more specific name such as *Draw.Reach attributes*. The line drawing is defined by selecting this property and clicking on the […] button. The following dialog box is displayed;



Note that, in common with many other Windows applications, it is not possible to specify a *Style* other than solid with a line *Width* greater than 1.

Draw.[Fill attributes]

[Fill attributes] may be replaced with a more specific name such as *Draw.Fill attributes 2*. The fill attributes are defined by selecting this property and clicking on the […] button. The following dialog box is displayed:

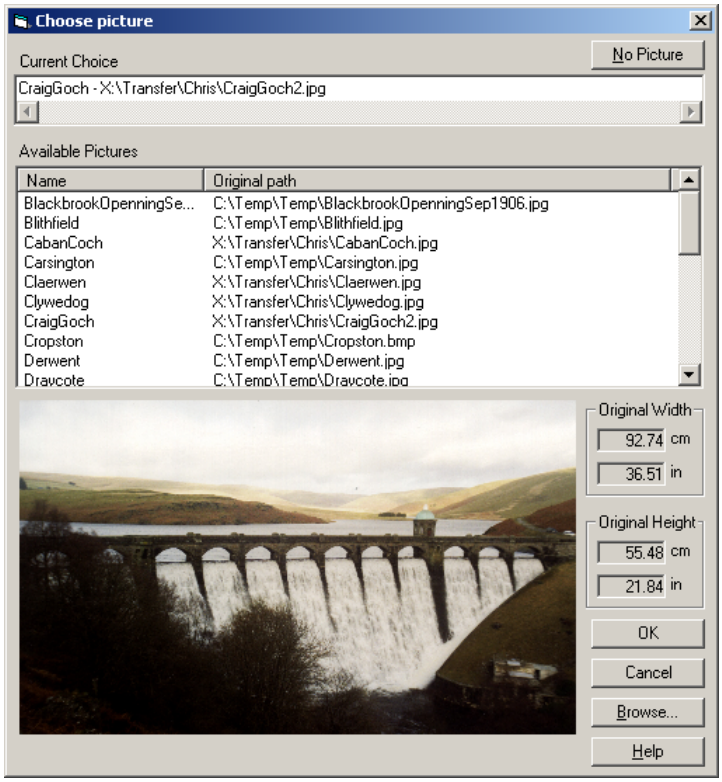


Draw.Font

Any Windows screen font available on the system. A standard font selection dialogue box is displayed to enable font selection.

Draw.Picture

Allows the picture to be displayed on this component to be selected. The picture selection window is displayed as shown below:



It is possible to select a picture already on the database from the list of available pictures or to import a new picture from file using the Browse command button. If a new picture is selected it copied from the source file and stored on the database.

Draw.Resize mode

Resizing can be *Istropic* (the original aspect ratio is maintained) or *Anisotropic* (the aspect ratio can change).

Draw.Shape

Shape the object is to take. For example, rectangular or circular.

Draw.Text

Any single line text string.

Options.Show name

If set to *True*, the name is shown on the schematic. This option must also be set to *True* to enable numerical animation of the Component during a model run.

Schematic.Left, Schematic.Top, Schematic.Width and Schematic.Height

The position (*Left, Top*), relative to the Top Left Hand corner, and size (*Width, Height*) of the Component on the schematic.

Schematic.Name X, Schematic.Name Y, and Schematic.Name Angle

The position of the Component name (*Name X, Name Y*), relative to the position of the Component.

Name Angle is reserved for future use.

Shell.Caption, Shell.Path, and Shell.Arguments

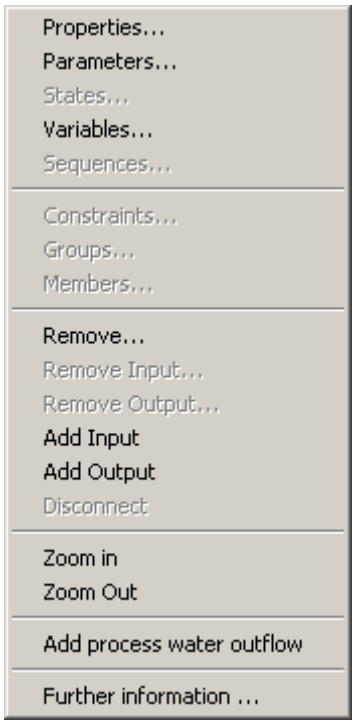
These three properties allow each Aquator Component to be linked to an external application.

For example, it would be possible to link a Water Treatment Works to the appropriate record in an Access database.

The second application is invoked by clicking the right mouse on the schematic, and selecting the appropriate item from the pop-up menu.

If *Shell.Caption* and *Shell.Path* are non blank, an item is appended to the pop-menu item for that Component.

For example if *Shell.Caption* = “Further information…”, the pop-up menu might look like:



Shell.Path must be set to the name of the application that is to be started. For example:

C:\Program Files\Microsoft Office\Office\MSACCESS.EXE

Shell.Arguments is optionally set to command line arguments of the second application. Continuing the example of the Access database. this might be the name of the database to open and name of macro to run after the database is loaded:

"C:\Aquator\Database\Aquator.mdb" /X WTW4