eWON Application User Guide

AUG 006 / Rev 3.0

You Select, We Connect

viewON - Objects, Animations and Actions How To

Content

This guide will explain you how to create and customize objects and give you an overview of the Animations and Actions that you will be able to realize thanks to viewON.

1. Hardware and software requirements....3
Hardware requirements....3
Software requirements....3
eWON firmware version....3
How to create an object....4
Path operations....16
Subtract operation....16
Merge operation....21
Intersect operation....24
Turn to path operation....26
Animations....29
Introduction....29
Color Animations....37
Color on State....37
Color on Measure....39
Color on Bar graph....40
Opacity Animations....42
Opacity on State....42
Opacity on Interval....43
Opacity on Measure....44
Visibility Animations....45
Visibility on State....45
Visibility on Interval....46
Movement Animations....46
Translation....47
Rotation....50
Basic Scale....52
Scale....52
Text Animations....53
Text Simple....53
Text on State....55
Text on Measure....55
2. Animation Simulation....57
3. Actions....60
Introduction....60
Send....62
Send Command....62
Send Command by Reference....63
Send Measure....64
Action Events....65
Load....67
Load View....67
Load URL....69
Global Actions....70
viewON Script....72
Script for animation....72
Script for actions....73
Revisions....75

Hardware and software requirements

Hardware requirements

In order to follow this guide you'll need:

- 1 eWON with viewON capabilities (for example : eWON Flexy, eWON 4005CD or another eWON of the 4000 family)
- 1 PC with an Internet access and a recent web browser

Software requirements

eWON configuration software:

The eWON is configured through its embedded web server. So all you need is a standard Web Browser software like Internet Explorer[i] or Firefox[ii].

Additionally we suggest you download the eBuddy utility on our website : http://support.ewon.biz/softwares.htm

This utility allows you to list all the eWONs on your network and to change the default IP address of an eWON to match your LAN IP address range. With eBuddy you can also easily backup/restore your configuration or upgrade the firmware of your eWON (if required).

viewON software:

To create your viewON project you need to install the viewON Editor on your PC.

To visualize the exported viewON application on the eWON you simply need an up to date web browser (IE9 and higher, Mozilla FireFox, Google Chrome,...). This makes the viewON project visualization compatible with any kind of platform (Computer, Tablet, SmartPhone) and any kind of OS (Windows, Linux, MacOS, iOS, Android).

The setup of viewON can be downloaded on the eWON web site: http://support.ewon.biz/softwares.htm

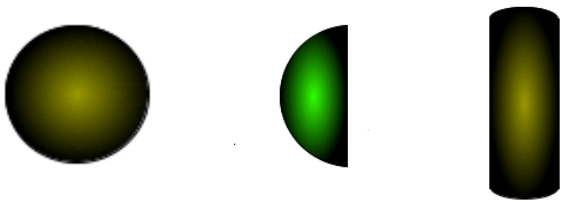
eWON firmware version

To be able to follow this guide your eWON needs a firmware version 7.1s0 or higher. A simple way to upgrade the eWON firmware is to use eBuddy, the eWON software companion.

As of version 8.0, **C**loud **A**ccelerated **L**oading is supported. This feature makes the loading of an eWON web page faster, including viewON and configuration web pages. This is useful especially when using slow communication media.

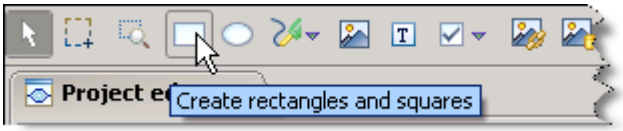
How to create an object

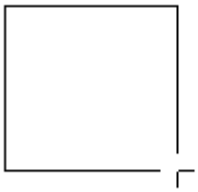
viewON gives the possibility to create almost an infinite number of objects thanks to its graphical features. You will be able to create classical shapes (squares, rectangles, ellipses etc...), but also objects that you can mold according to your needs. Thanks to this document, you will be able to create objects with a **3D** aspect as well:



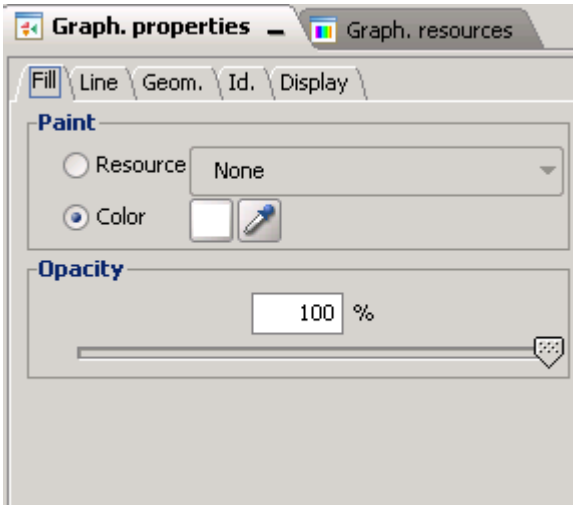
Let us create a simple object : a square.

First, click on **Create rectangles and squares** in the tool bar before drawing your square in your View (click and drag).

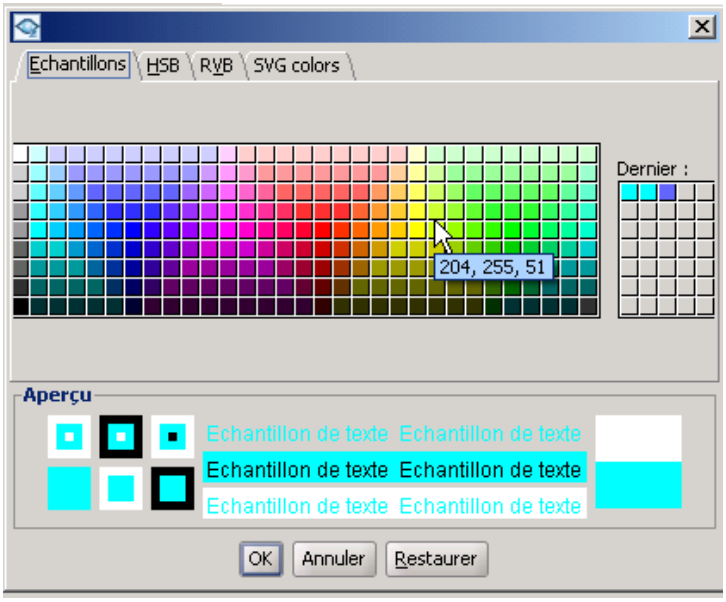




As you can see, this object is very basic. Let us see how it can be customized. viewON offers a lot of features to that end. To modify your object, click on **Graph. Properties**. In there, you will find 5 tabs that will help you customize your object.

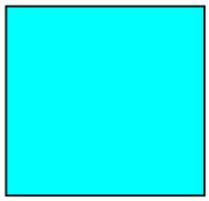


From the Fill tab, you can change the fill of your object . As you can see, you can choose the color and the opacity. By default, your object is 100% opaque. Click on the button next to **Color** to open the color window and select the color you would like to use. Later in this document, we will see how to use special color effects on your object (**Resource**).

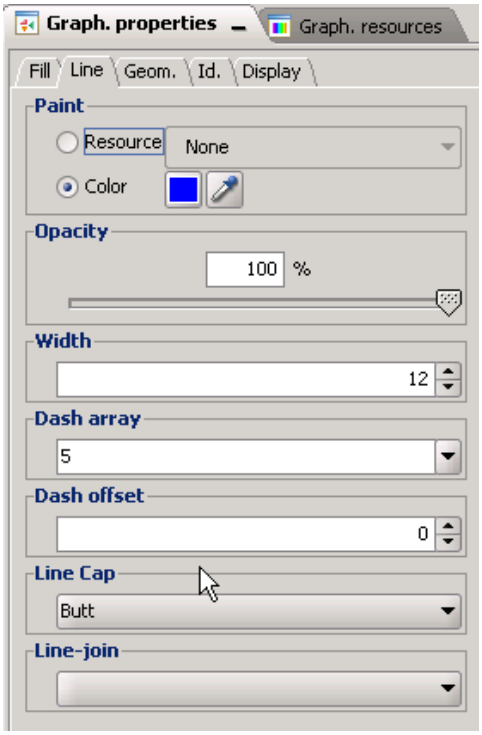


Finally, click on **OK**.

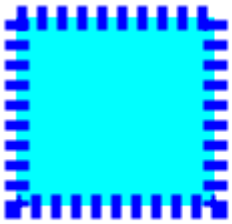
Here is your “new” object:



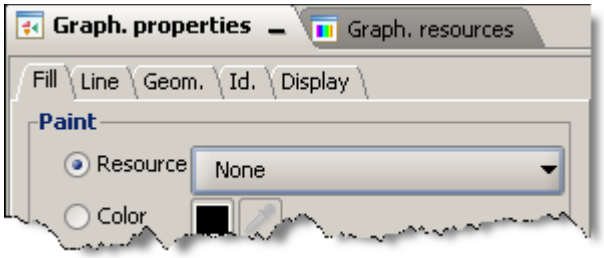
If you click on the **Line** tab, you will be able to change the line of your object, you can make it wider, hide it, choose to use dash arrays, change the color, the opacity, etc.



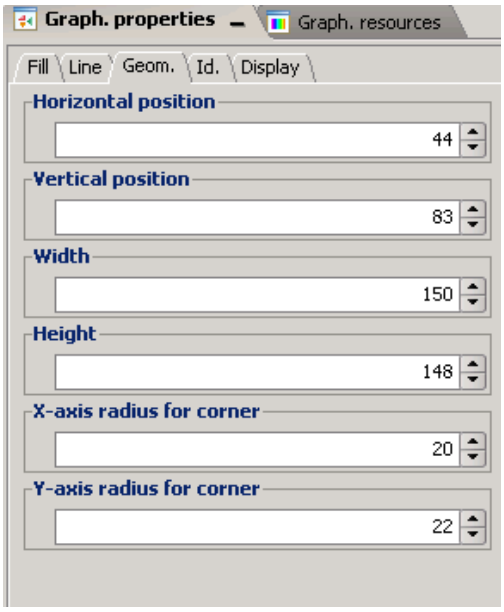
Let us see the result of our customization (according to the parameters inserted in our example):



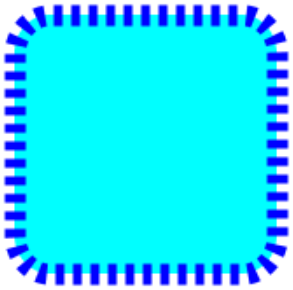
NOTE If you want to hide your object, simply check **Resource** and choose **None.**



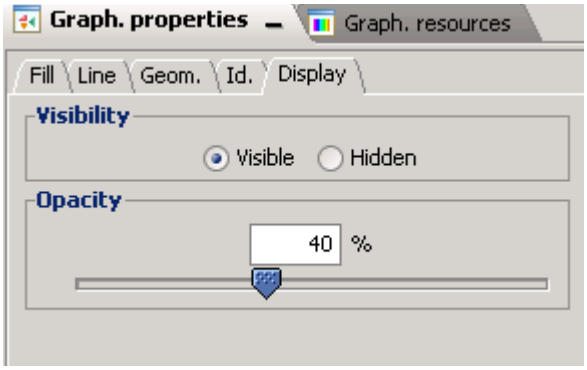
If you click on the **Geometry** tab, you will be able to change the position of your object in your View, and also make it larger or smaller and round the corners as you please thanks to the **X-axis radius for corner** and the **Y-axis radius for corner**.



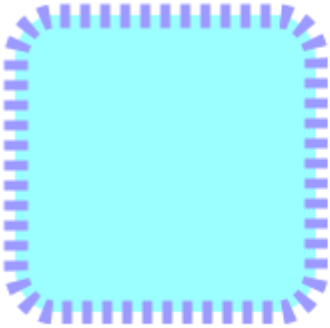
Let us see the result of the modifications made to the geometry:



And finally, you can modify the display of your object (more or less opaque; visible or hidden). Click on the **Display** tab.

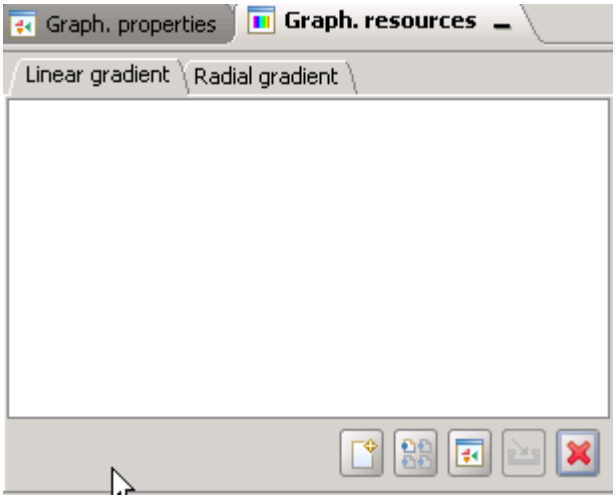


Let us see the result of our modifications:

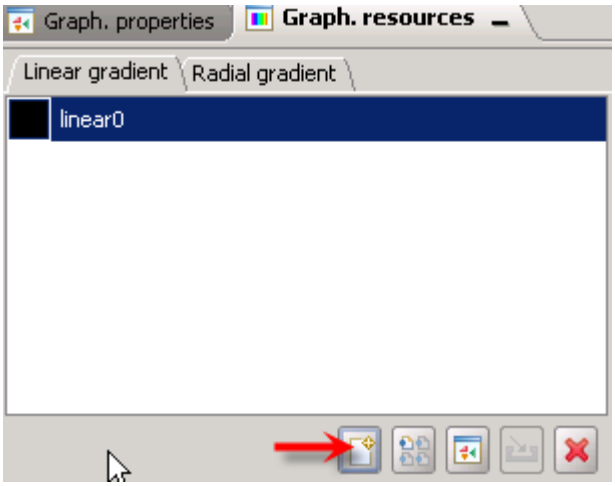


Next to the **Graph. Properties** tab, you can click on **Graph. Resources**. This option gives you the opportunity to create a gradient thanks to the features offered by viewON.

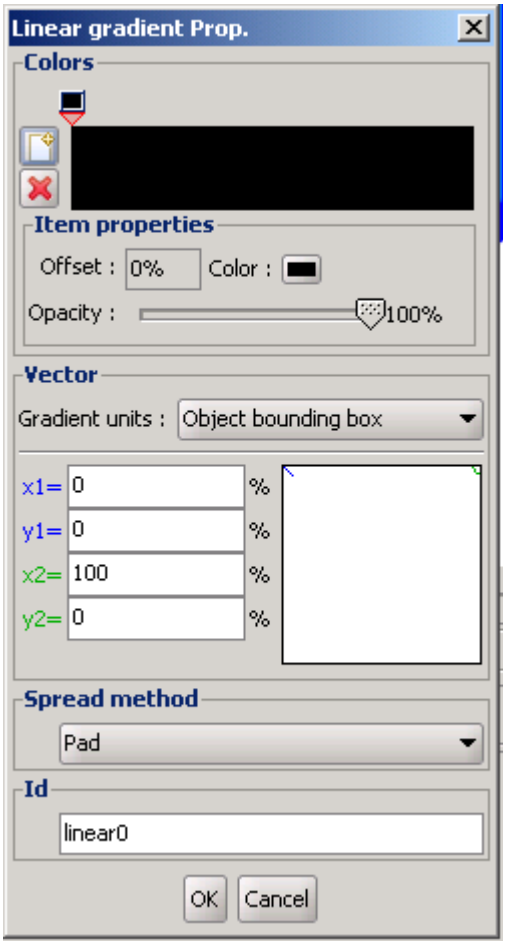
Click on **Graph. Resources**. In there, you will find a **Linear gradient** tab and a **Radial gradient** tab.



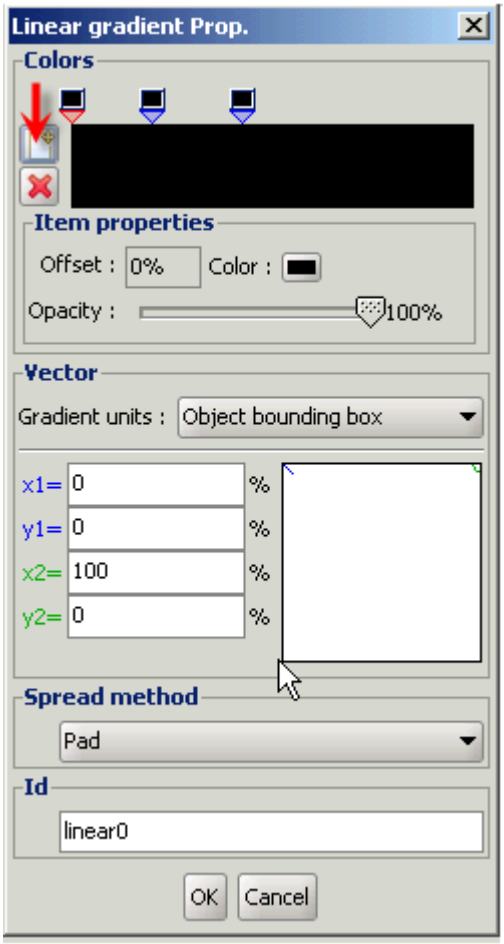
As you can see, both tabs are empty. Let us use the **Linear gradient,** to add a gradient. Click on the "**New**" button, a black gradient called "linear0" will appear. You will work on it to create the color and effect you would like to have.



Double-click then on "linear0" gradient and the following window will pop up.

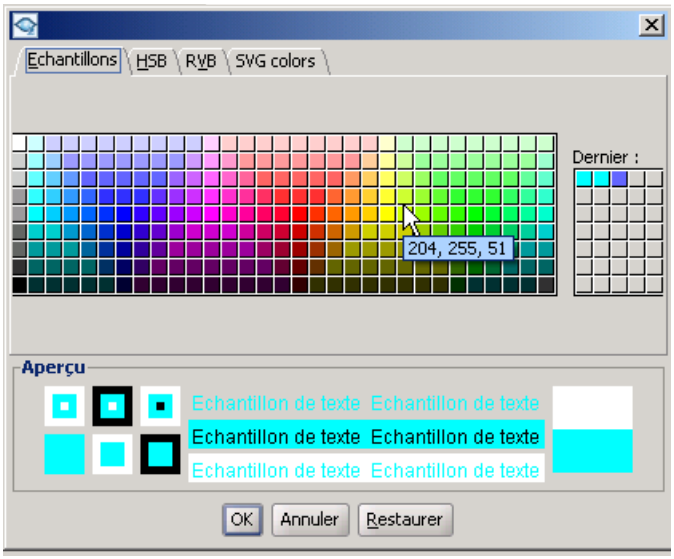

Linear gradient Prop.
Colors
Item properties
Offset : 0%
Color :
Opacity : 100%
Vector
Gradient units : Object bounding box
x1= 0 %
y1= 0 %
x2= 100 %
y2= 0 %
Spread method
Pad
Id
linear0
OK
Cancel

To create an effect, you have to add color cursors. To do so, click on the **+** button.



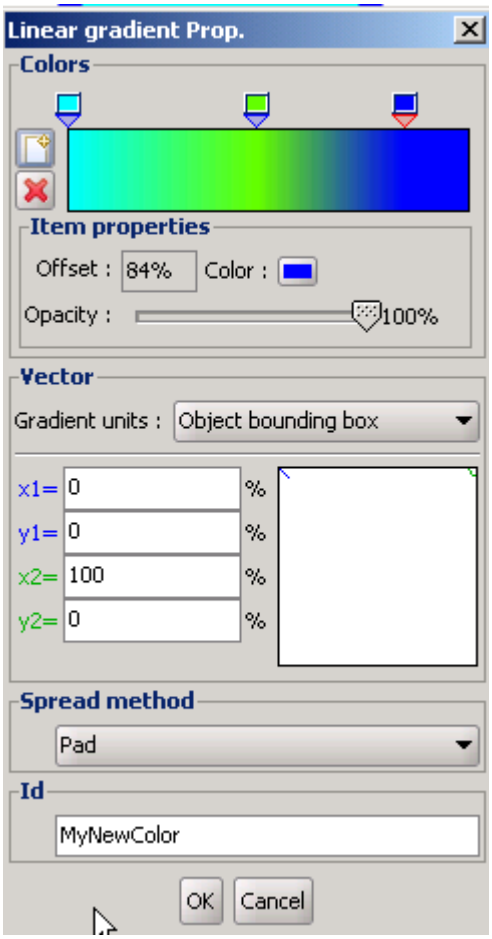
In the above picture, 2 cursors have been added. You can add more or less, if needed. In our example, the first cursor is the selected one. The selected cursor is red while the others are blue., You can work with the selected cursor. To work on another cursor, simply select it by clicking on it.

Click on the button next to **Color**, the following window will open.

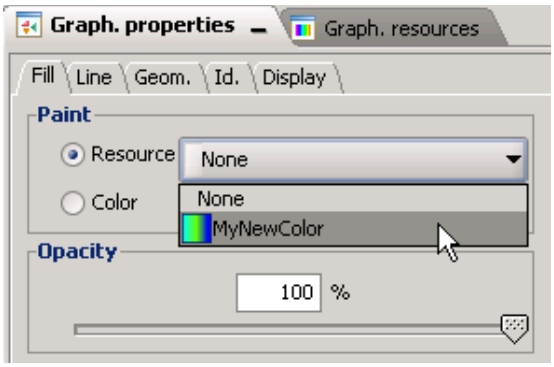


Select a color and click on **OK**.

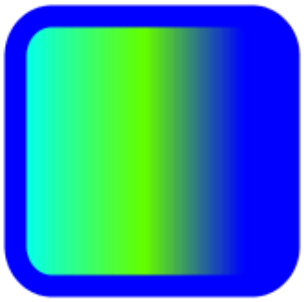
Make the cursor slide to the right to create the effect you want. Proceed the same way for the two other cursors to obtain the following result:



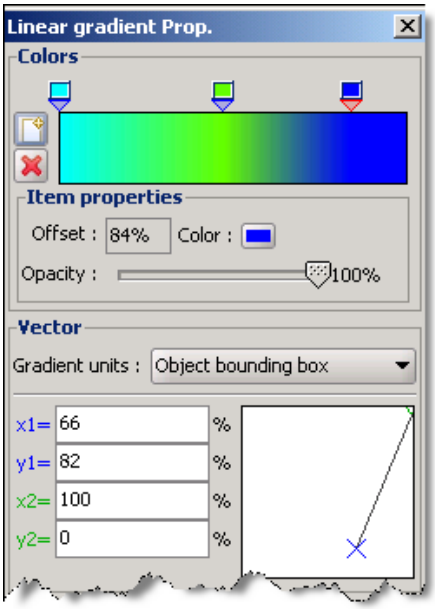
You can change the ID of the color as well. In our example, “MyNewColor” has been chosen as an ID. Of course, you are free to choose yours (please do not use spaces between each word). Click on **OK** and go back to the **Graph. Properties**. Check **Resource**, you can choose your color now.



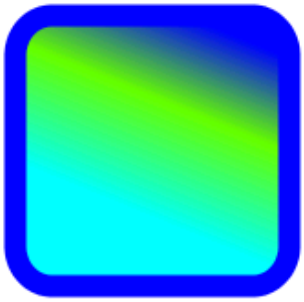
Below is the result on your object:



Of course, depending on the vector (x / y) you have chosen, the aspect will be different. The above example is with vector x1=0, y1=0, x2=100 and y2=0. But if you want another aspect, then you will have to modify those vectors.

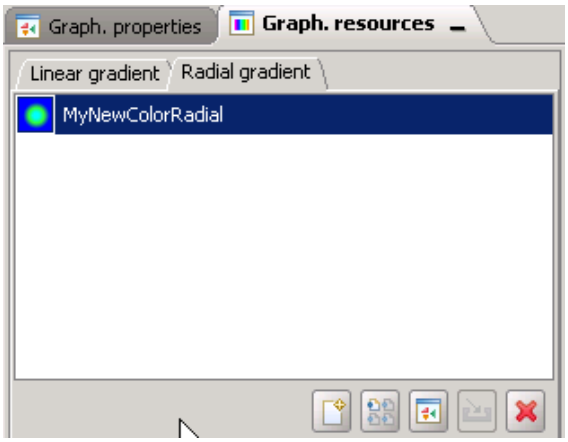


If you modify the vectors x and y as in the above case, your object will look like this:

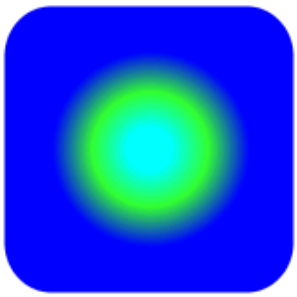


If you want, it is also possible to make a radial gradient (more commonly used for circles and **3D**).

To create a radial gradient, simply click on the **Radial gradient** tab and proceed the same way as for the **Linear gradient**.

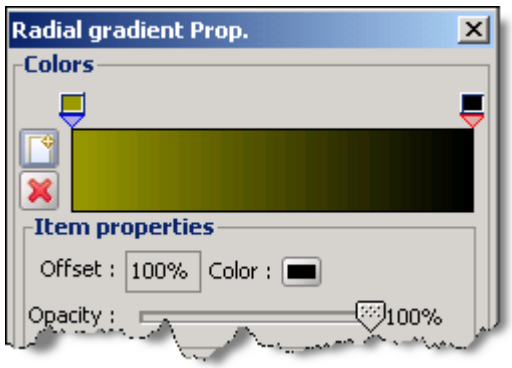


Here is the result on our object:



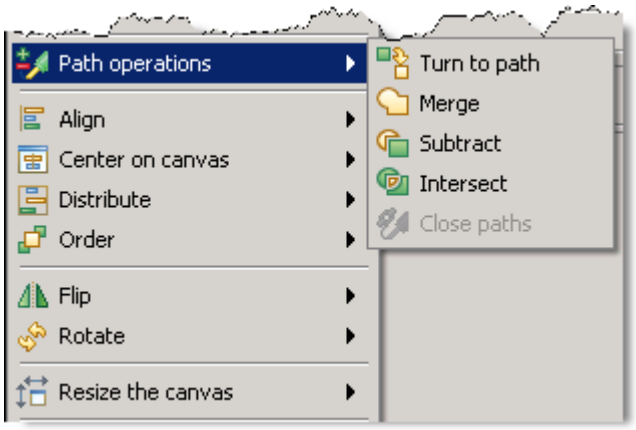
The **Radial gradient** is very convenient to give a **3D** aspect to your objects:

To obtain this result use two colors : black and another color. Then, slide the black cursor to the extreme right:



Path operations

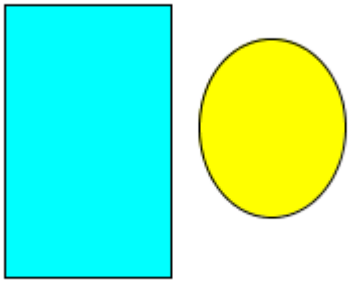
Sometimes, you have to create objects which need to be more sophisticated such as semi-circles or rectangles with a hole inside. To help you, viewON integrates **Path operations**. We will see that thanks to this function, objects can be merged, subtracted, etc.



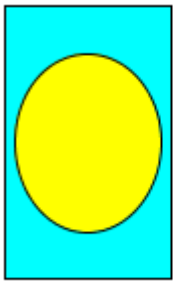
In this document we will describe how to use this function optimally through different examples.

Subtract operation

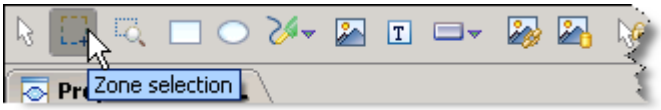
First of all, let us create 2 objects: a rectangle and a circle.

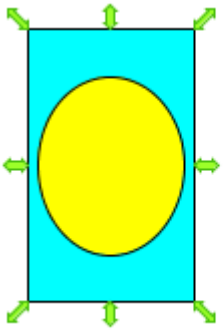


Let us now imagine that you need a hole in your rectangle. A simple way to make it is to use the **Path operations.** But first, you have to drag and drop the circle that you have created on the rectangle like in the following picture.



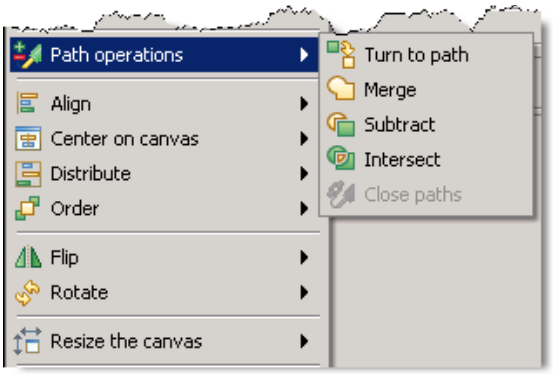
To use the **Path operations** options, you will have to select both objects at the same time. To do so, click first on the rectangle, press SHIFT and click on the circle. Pay attention, if you click first on the circle, the rectangle will subtracted. Or click on **Zone selection** in the viewON toolbar.



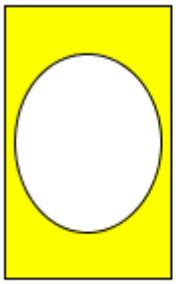


The green arrows around the object show that your objects are both selected. To make the **Path operations** options appear, right-click on your object.

The **Path operations** context will open.

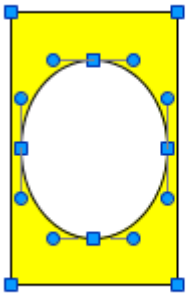


Simply click on **Subtract.** Let us see the result of this process:



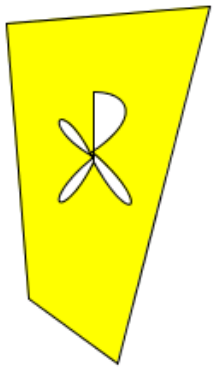
As you can see, the rectangle has now a hole, but the color has changed as viewON uses that latest color of the latest created object. Do not worry; you will be able to modify this color as you please. All you have to do is follow the instructions on p. 5.

Be aware that it is still possible to modify this object thanks to the blue points that will appear when you select the object:



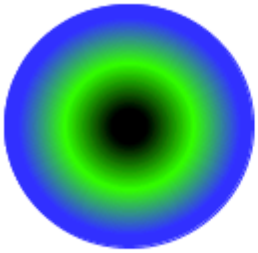
By clicking and dragging those blue points, your object can take a very different shape.

Here is an example:

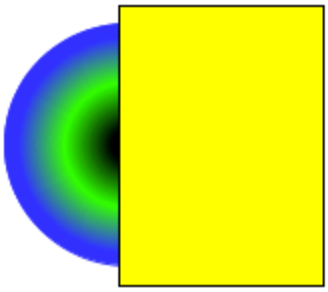


By using the **Subtract** option, you will also be able to create semi-ellipses. Let us see how to proceed.

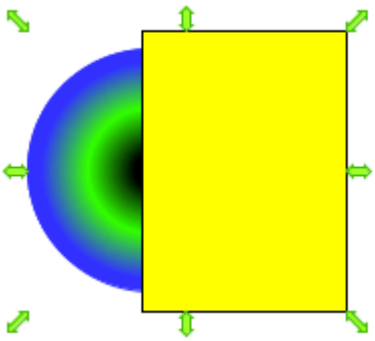
First of all, create a circle. No need to customize it at this point of the process.



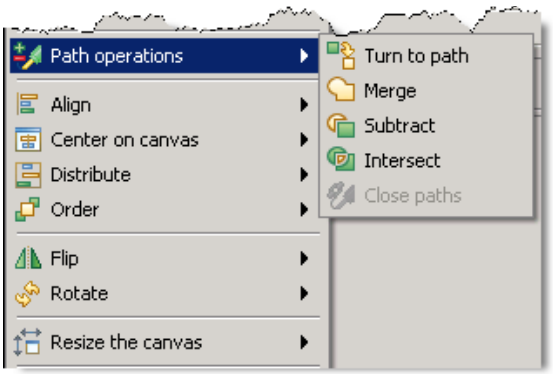
Then, create a rectangle that you will put on your circle in order to hide half it.



Once this has been done, you will have to select both objects. To do so, click on your circle, SHIFT and click on the rectangle. Green arrows showing that both objects are selected appear:



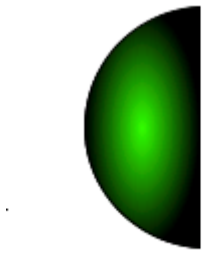
You can now right-click on your object to make the **Path operations** appear.



By selecting the **Subtract** option, you will obtain the following object:

As you can see the color of your newly-created semi-ellipse has to be customized according to your needs (refer to page 5 and following):

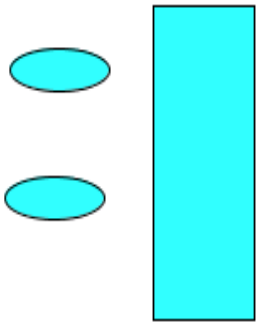
Here is one possible result:



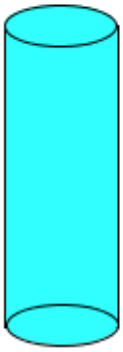
Merge operation

Let us use the **Merge** operation now. This option gives you the possibility to make one object with 2 or more objects, depending on your needs.

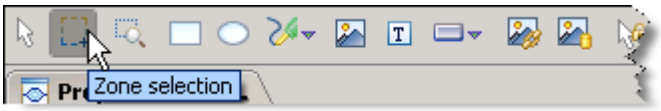
First of all, create your objects. In our example, we will use 3 objects:



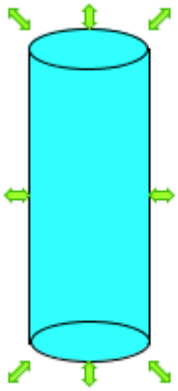
Then, move your objects according to the shape you would like to obtain.



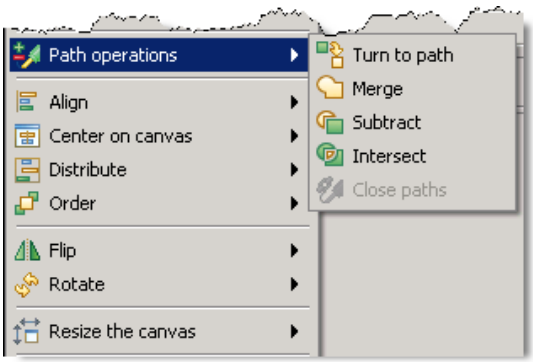
To be allowed to merge your objects, you first need to select them all. Click on one of them, SHIFT, click on the second object and then on the third. Or click on **Zone selection** in the viewON toolbar.



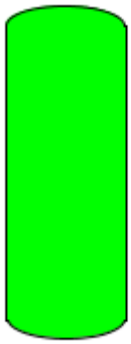
The green arrows show that the three objects are selected.



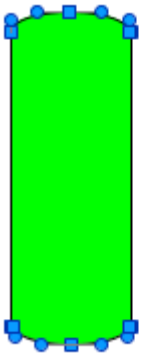
Right-click on the objects to make the **Path operations** appear and select **Merge**.



Here is the object you will obtain:



You can now customize your object according to your needs. Again, you can modify its aspect by using the blue points (click and drag).

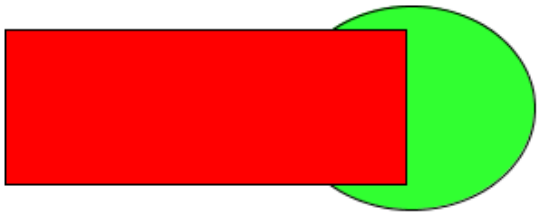


Here is one possible result (there are many of them!)

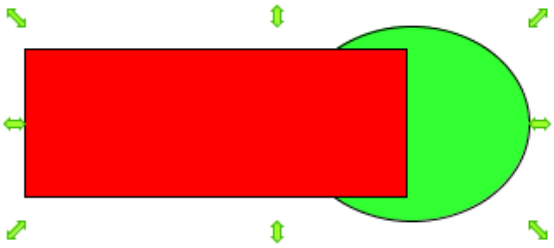
Intersect operation

In the **Path operations**, you will also find the **Intersect** operation. This option allows you to obtain only the intersection between objects.

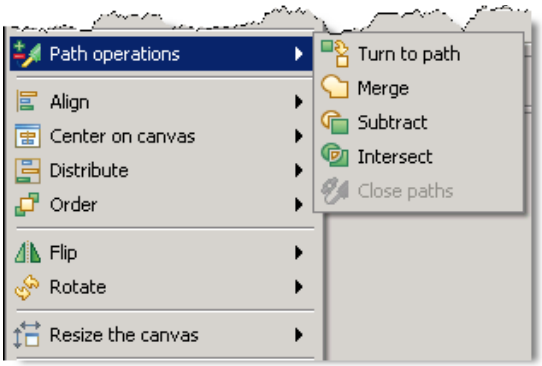
Let us create two objects:



As for the other **Path operations**, you will have to select them both. Click on an object, SHIFT, click on the other object. The green arrows prove both objects are selected (or use the **Zone selection** in the toolbar).

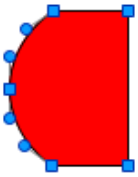


Right-click now on your selected objects to open the **Path operations** options:



Select **Intersect** and you will obtain the following object:

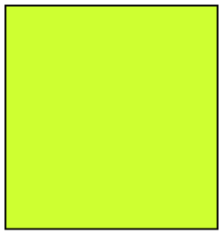
Again, if you play with the blue points, you will be able to modify the shape of your new object.



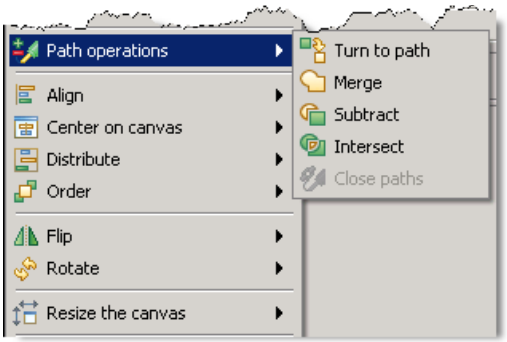
Turn to path operation

Finally, in the **Path operations** options, you will find the **Turn to path** operation. This option allows you to modify the selected object. A created object can be modified (larger, smaller) but only horizontally or vertically. But with the **Turn to path** option, it is possible to modify the shape of an object by using the angles. So, a square can become house-like, for example.

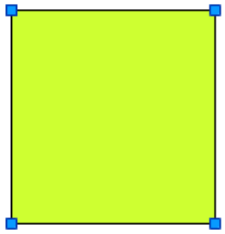
Create an object:



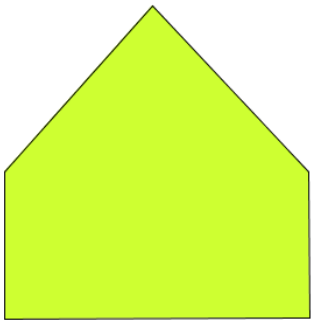
Select the object and right-click on it to open the **Path operations** options and select the **Turn to path** option.



Four little squares will appear on each corner. This means that you will be able to work on them. Click and drag to shape your object.



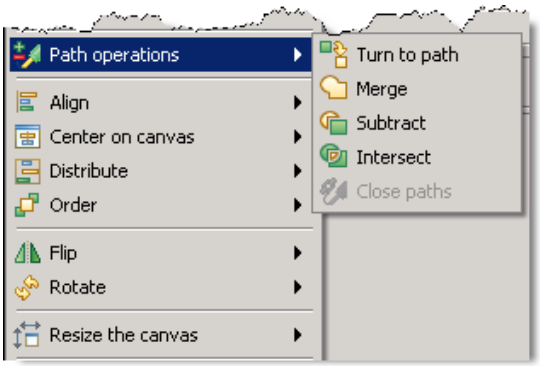
Here is one possible result:



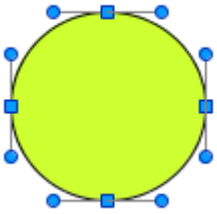
Let us assume now that you need a more sophisticated object. In this case, using an ellipse turns to be the best choice.

Create a circle:

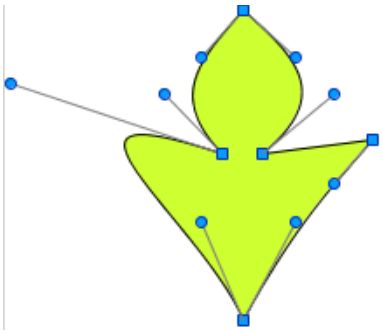
Select your object and right-click on it to open the **Path operations** options and select the **Turn to path** option.



Blue points appear on the circumference of the circle. You will be able to work on them to shape your object according to your needs.



Here is one possible result:



Animations

Introduction

In this part of the document, we will explain how to use the animations in viewON. As you will see, there are several animations that you will be able to link to an object (which is linked to a Tag).
The animations are divided into five sections: **Color**, **Opacity**, **Visibility**, **Movement** and **Text**.

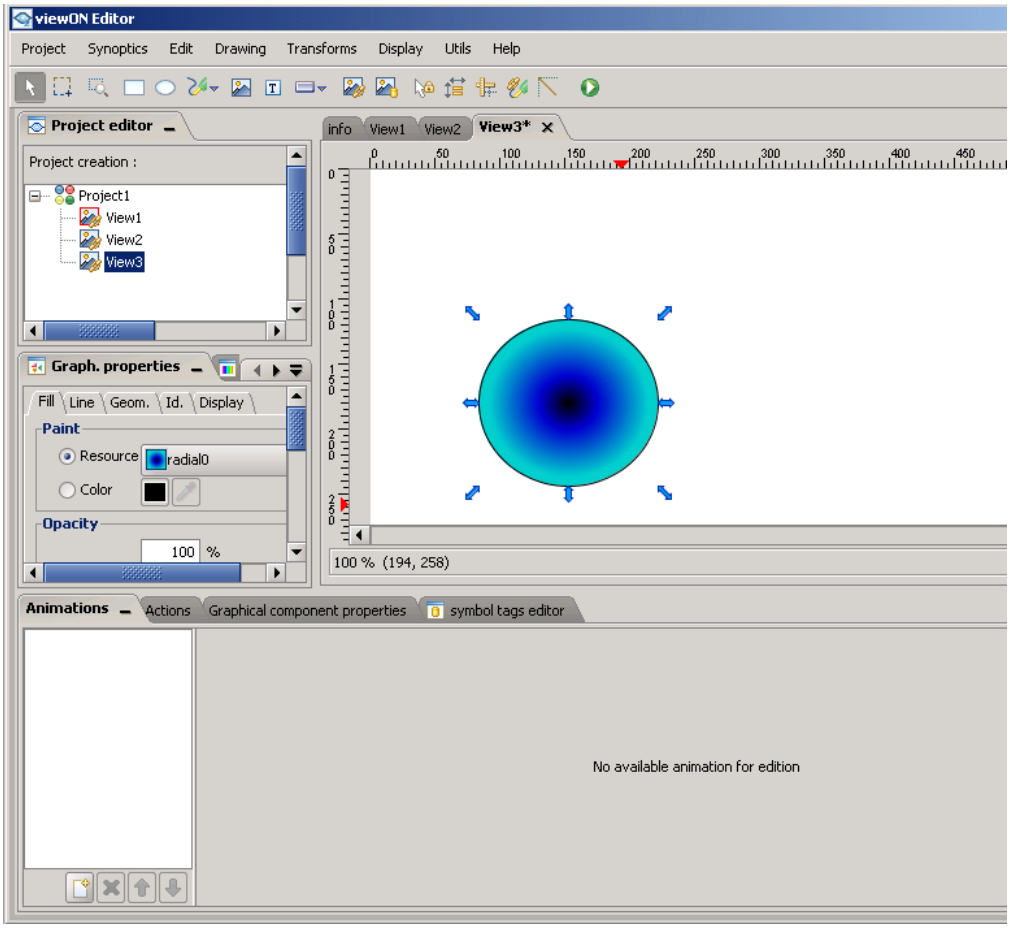
Each type of animation has its own options:

Animation	Type	Description
Color	*State*	Color animation using a state variable
Color	*Measure*	Color animation using analog Tag intervals
Color	*Bar graph*	Bar graph animation using an analog Tag value
Opacity	*State*	Opacity animation using a state variable
Opacity	*Interval*	Opacity animation using analog Tag intervals
Opacity	*Measure*	Opacity animation using an analog Tag value
Visibility	*State*	Visibility animation using a state variable
Visibility	*Interval*	Visibility animation using analog Tag intervals
Movement	*Translation*	Object translation using analog Tag values
Movement	*Rotation*	Object rotation using analog Tag values
Movement	*Scale*	Object resizing using analog Tag values
Text	*Simple*	Text animation using the eWON Script
Text	*State*	Text animation using a state variable
Text	*Measure*	Text animation using analog Tag values

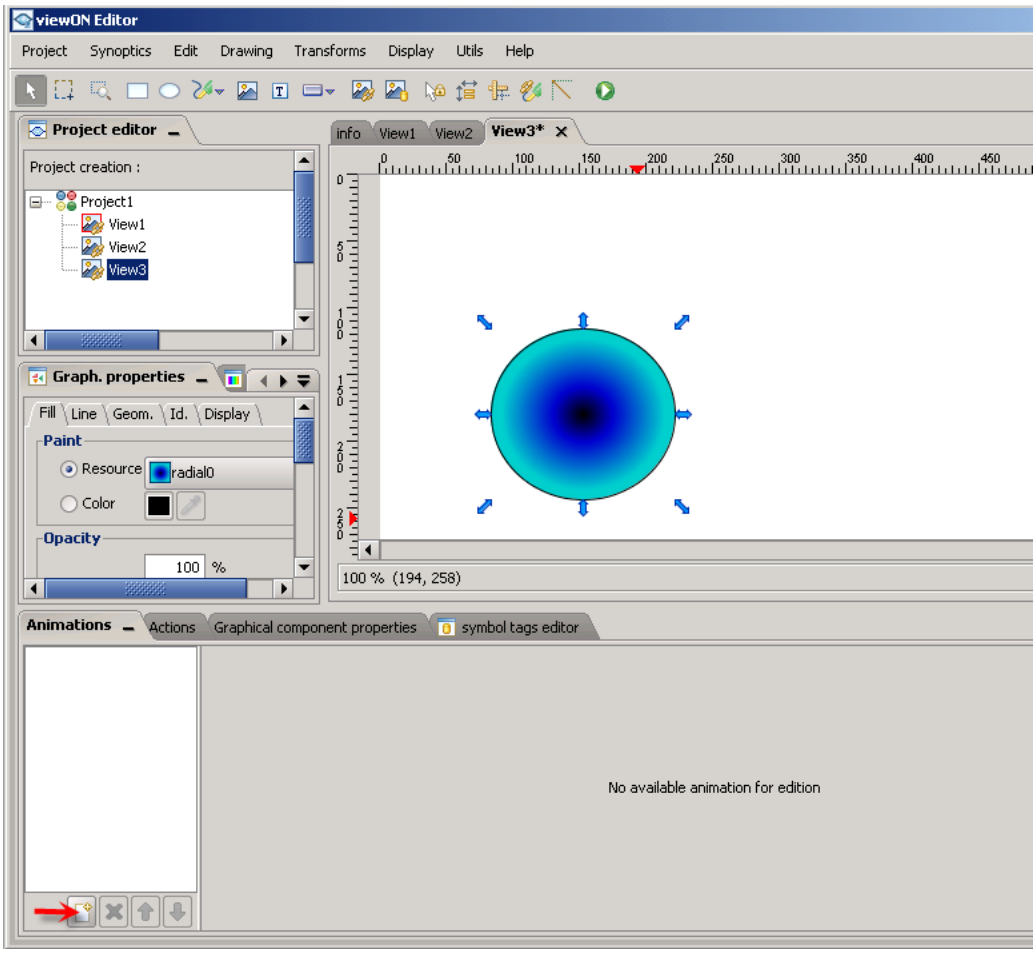
Before developing the different animations featured in viewON, let us have an overview on how animations, Tags and Scripts can be linked to your object.

First of all, once an object is present in your **View**, select it (by a click on the object), otherwise you will not be able to work on your object.

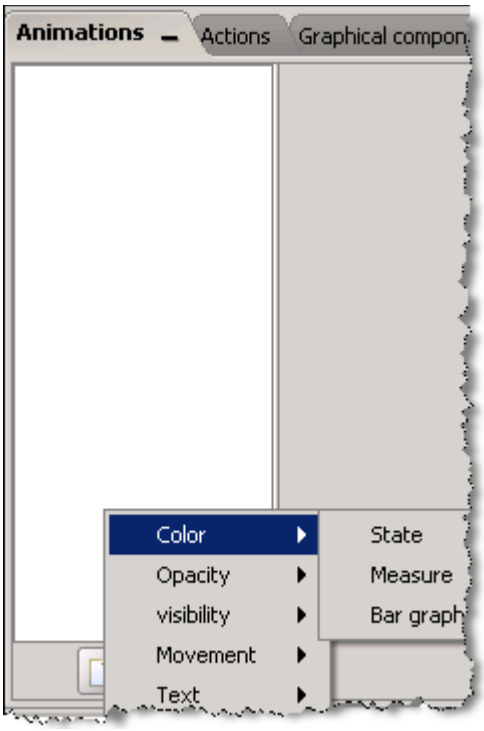
In the following picture, the small arrows around the object mean that the object is selected. So, it is now possible to work on it.



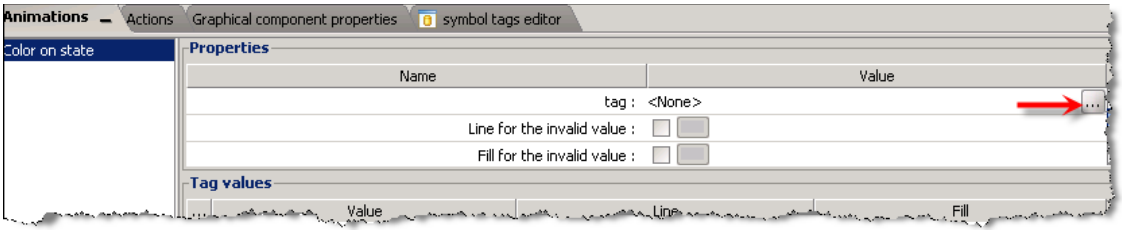
In the second part of the screen, you can see the **Animations** section, click on the “New” icon at the bottom of the screen.



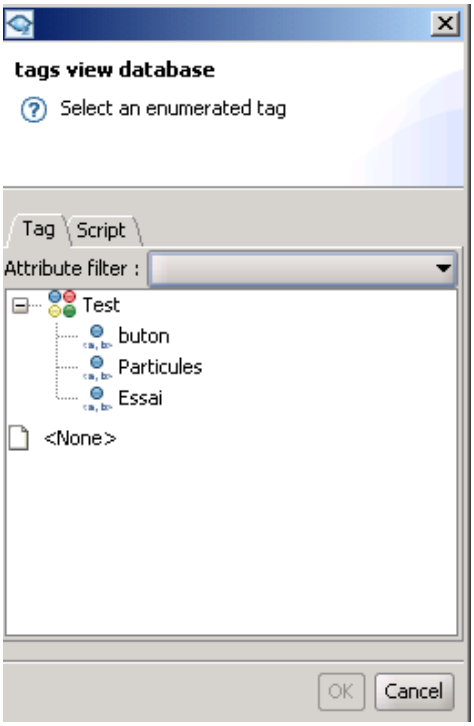
This action will open a context menu that lists all the animations you can apply to your object.



Once you have chosen the animation you have to select a Tag to link to this animation. To do so, click on the small button next to the **Tag** row.

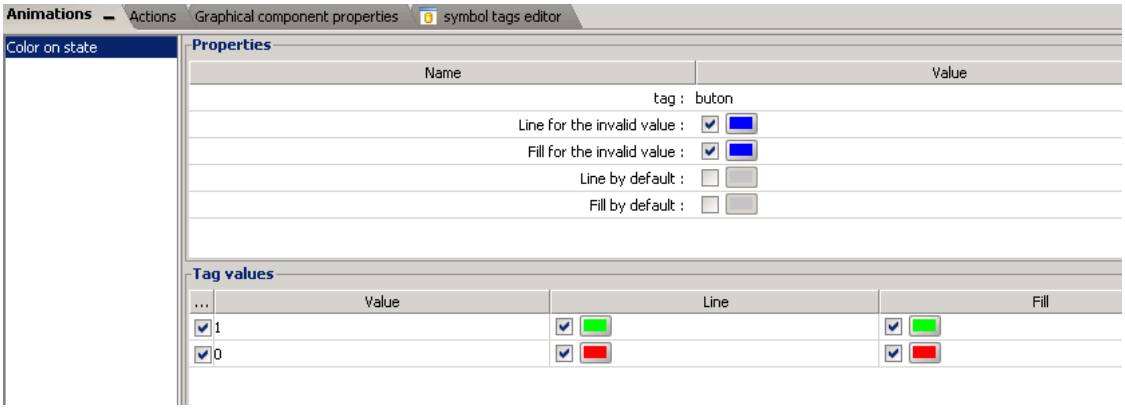


The following pop-up window will open. It lists all the Tags available for the **Color on State** animation (for example).

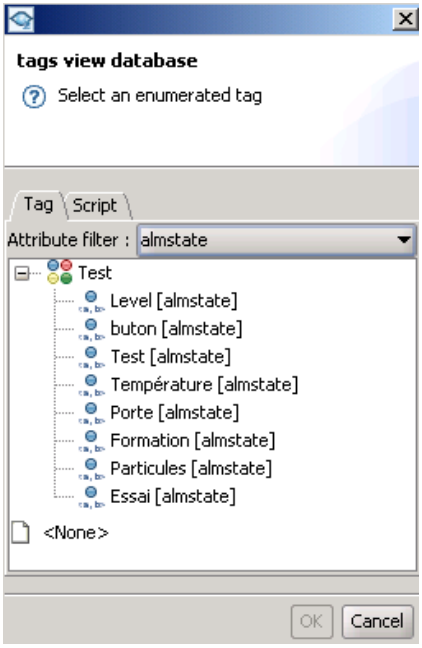


Be aware that if you apply a "**on state**" animation, only Boolean Tags (and alarm state/alarm type) can be linked to this kind of animation. On the other hand, for a "**on measure**" animation on an object, **only** analog Tags can be used.

Select the Tag that you want to link to your animation and click on **OK**. Your Tag will be allocated to your animation and object as shown in the following picture:

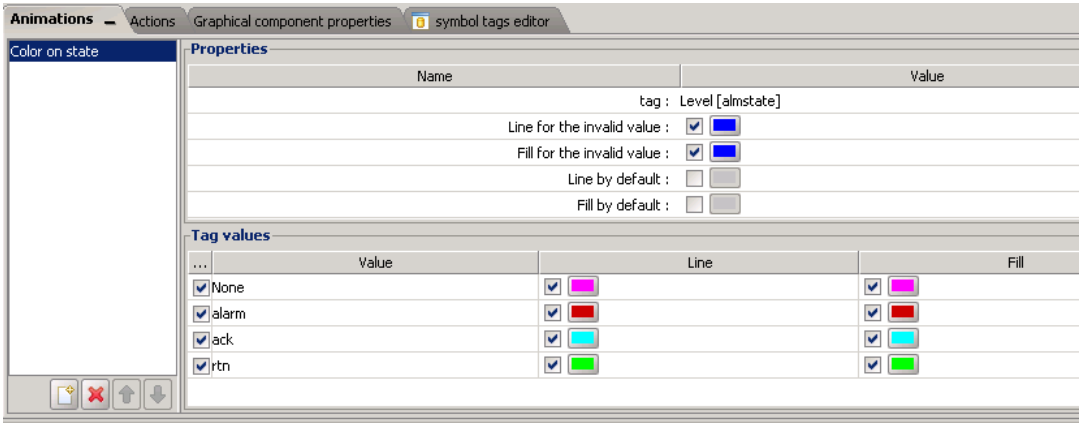


If you want to link your animation to an alarm state of a Tag, all you have to do is click on the arrow next to **Attribute filter.** In this case, you will be able to choose a Tag (Boolean or analog) listed in the **Tags View Database** as in the below picture.

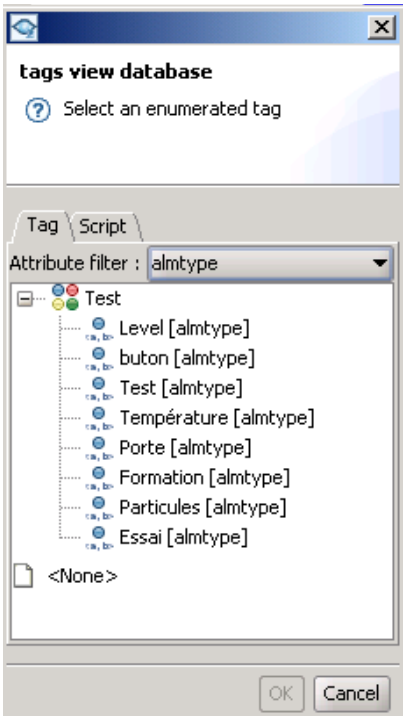


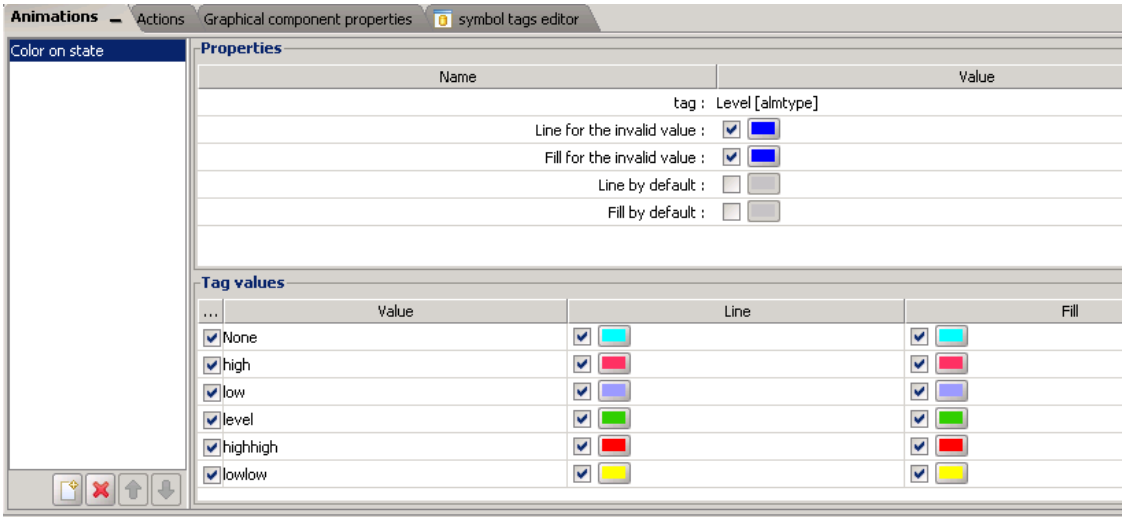
Select the Tag that you want to link to your animation and click on **OK**.

Your Tag will now be allocated to your animation and object as shown in the following picture:



You can also use the **Attribute filter** to link your animation to the alarm types.



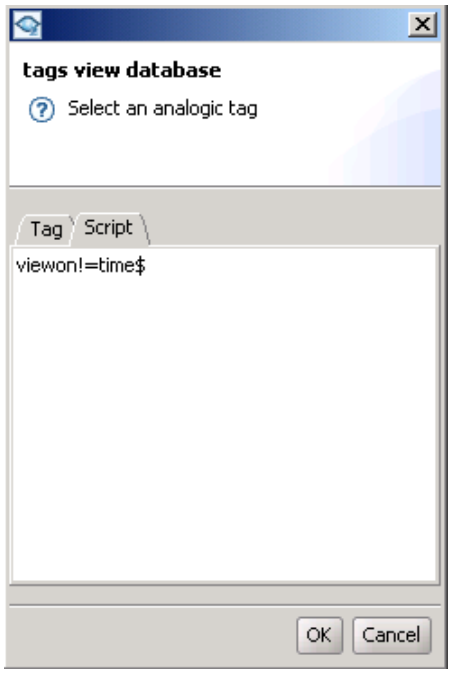


In our example, if the alarm state of the Tag is high (warning), the object turns pink. If the alarm state of the Tag is high high (alert), then, the object turns red, meaning that you need to make an action. The same occurs with the low (warning) and low low alarm state (alert).

NOTE

Instead of linking directly a Tag, you can also link a Script to your animation. To do so, simply click on the **Script** tab in the **Tags view database** window.

Thanks to a syntax close to BASIC, you can, for instance, ask the eWON to send you or display the time on your View (with the Text Simple animation treated later in this document).



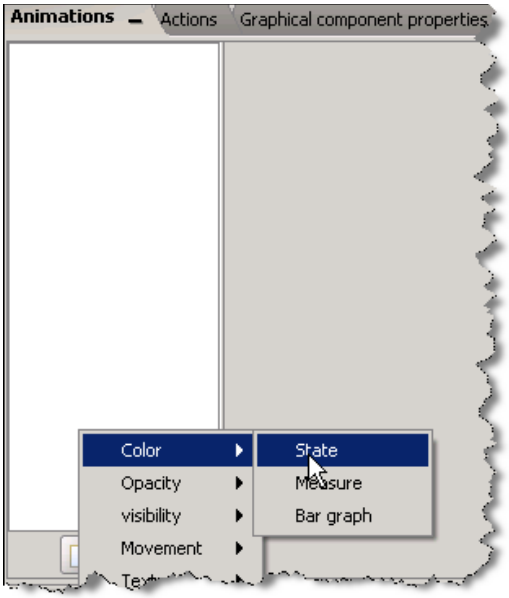
For further information on the BASIC syntax of the eWON, please refer to the Script Chapter at the end of this document.

Color Animations

This kind of animation will give you the opportunity to change the color of an object according to a state or a value of a Tag linked to an object. There are three types of color animations available (**State**, **Measure** and **Bar graph**).

In the **Animations** context, you can choose to animate your object according to the state of a Tag.

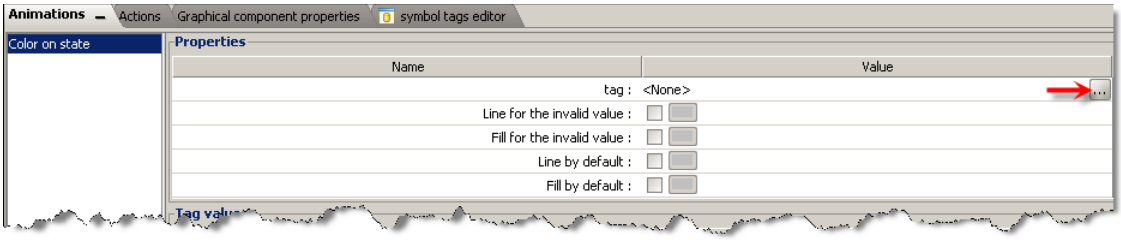
To do so, you have first to select your object, then click on “New” at the bottom of the **Animations** section.



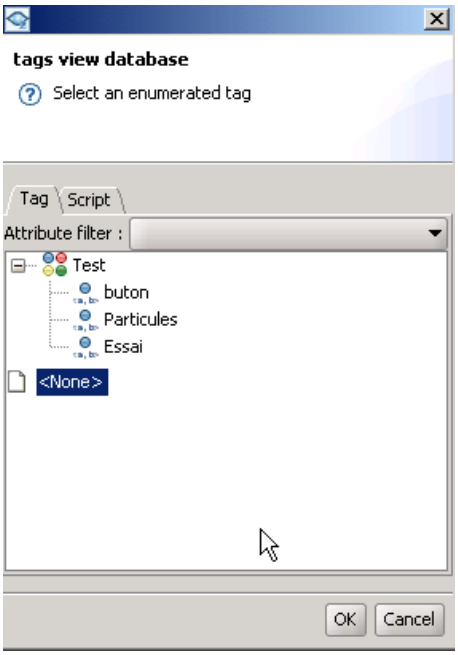
Color on State

In the **Color** sub menu, choose **State**.

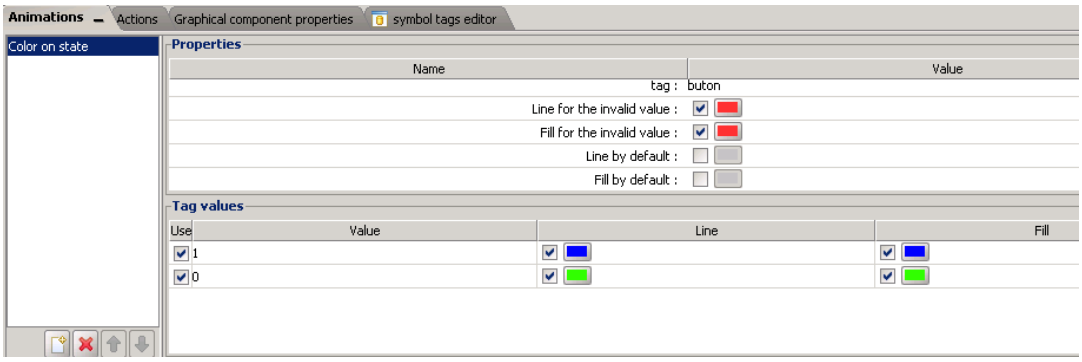
The following window will be displayed.



In the window, you will have to select a Tag. Click on the ... button next to the **Tag** row to open the next window. As you will see, only the Boolean Tags are displayed as it is an animation that needs a state. If needed, you can also link this animation to the alarm states of a Tag by using the **Attribute filter** option. When you have picked the Tag that you want to link to your object, click on **OK**. For example the Tag called "button"

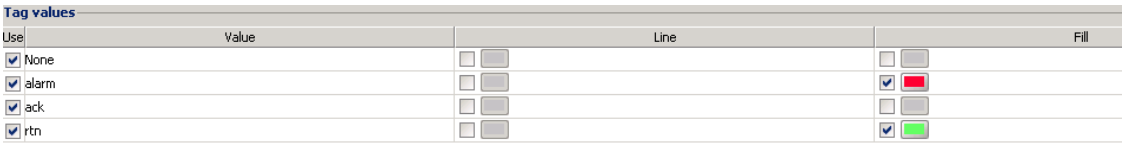


In the **Properties** section, choose the color of the fill and/or line (depending on what part of the object you would like to modify) for the invalid value and for the different states. The default checks are not needed.



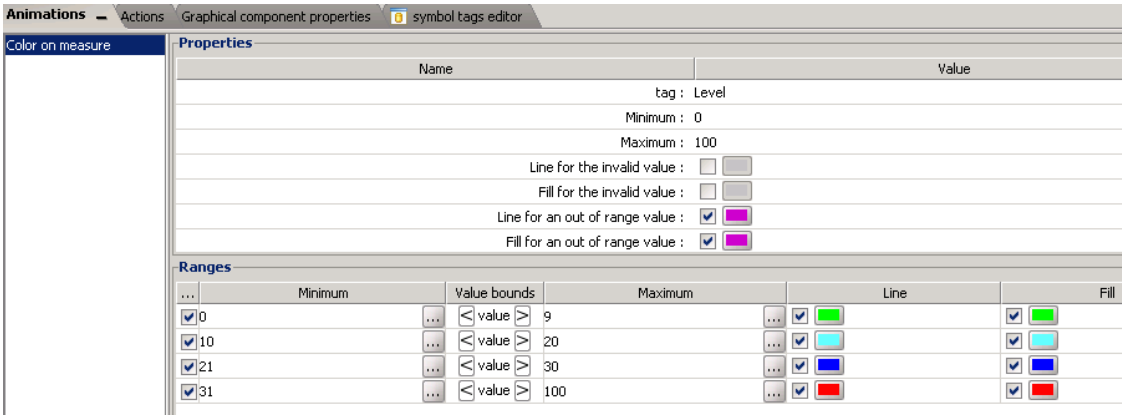
The above picture shows that when the Tag value is 1, then the object will become blue. On the other hand, when the Tag value is 0, then the object will become green. The invalid value colors will be used when the value of the Tag is neither 0 nor 1.

If you choose to link this animation to the alarm states of a Tag, then the window displayed will give you the chance to add a color for each alarm state (ALM/RTN/ACK) as shown below. If you uncheck one of those alarm state values, the default colors will be applied to the unchecked states.

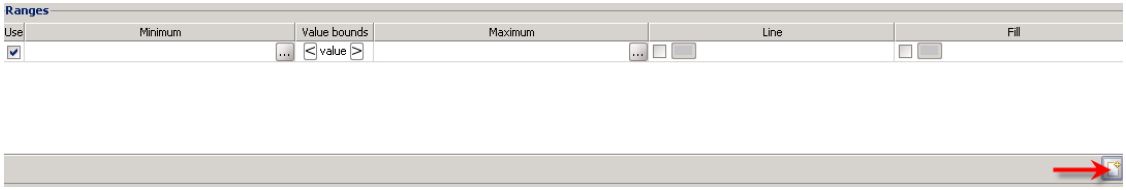


Color on Measure

In the color context, you can also decide to apply a color to your object according to the measures of a Tag. Here again, do not forget to choose a Tag to link to the animation. In the dialog box, only the analog Tags are listed as the animation “on measure” can only be applied to those kinds of Tags. In the **Properties** section, choose the colors you want to add to the different values. Each color is applied when the value is between the ranges of values you specify (green between 0 and 9, blue between 10 and 20 etc.)



If you click on “add” on the right bottom in the **Ranges** section, you will be able to add several ranges of values.



In the **Minimum** and **Maximum** rows, you can manually add the wanted value or by clicking on the **...** button. If you click on the greater-than or less-than signs, you will be able to obtain an equal sign.

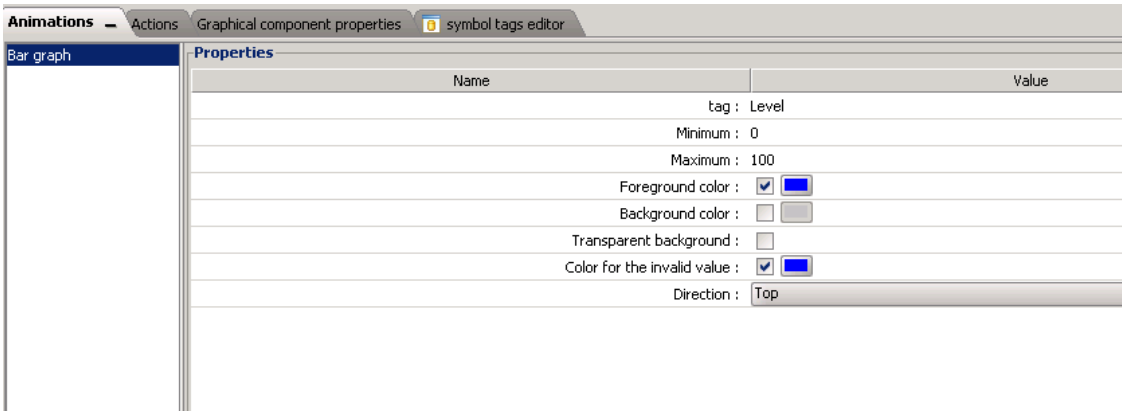
Be aware that the colors for out of range values will be used for values not defined in the **Range** section.

Let us assume now that the minimum of the Tag is 0 and the maximum is 100. You can apply a color for the values between 0 and 100. You can ask viewON to change your object into light blue for values ranged between 10 and 20; use dark blue for values between 21 and 30 and so on. In short, you can apply a color for each value your Tag will go through. For other values, your object will become purple.

The **Out of range** value color will be applied when the value of the Tag is less than or equal to 0, equal to 9, 20, 30 and above 100. To avoid the out of range value color, add an equal sign as previously explained.

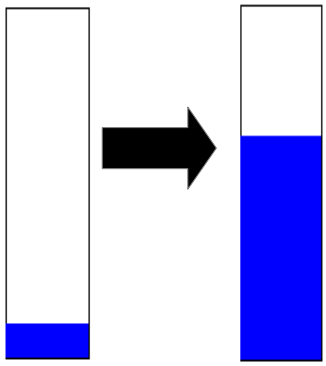
Color on Bar graph

In the color context menu, you will be able to select **Bar graph.** In this case, it is possible to see your object (a rectangle for instance) being filled according to the status of the Tag linked to this animation. The **Bar graph** animation is only available for analog Tags. In the **Properties** section, you will have to introduce a minimum and a maximum (by default the min. is 0 and the max. is 100).



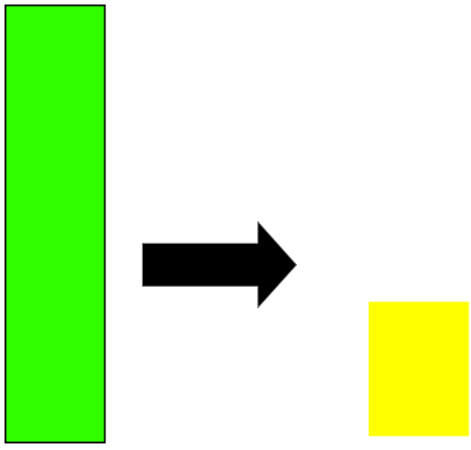
Choose a color for the foreground. This will fill your object. You can also apply a color to the background, but this is not mandatory. In this case, if the background is white with a black outline and the foreground is blue, then the white color will disappear under the blue color when the object is filled. However, the black line remains. Finally do not forget to tell viewON the direction you want to give to the foreground color (to the top, to the bottom, etc.)

You should have an animation like the following one:



Tag value = 10 *Tag value = 60*

But if you check the **Transparent background,** then, your animation will be like the following one:

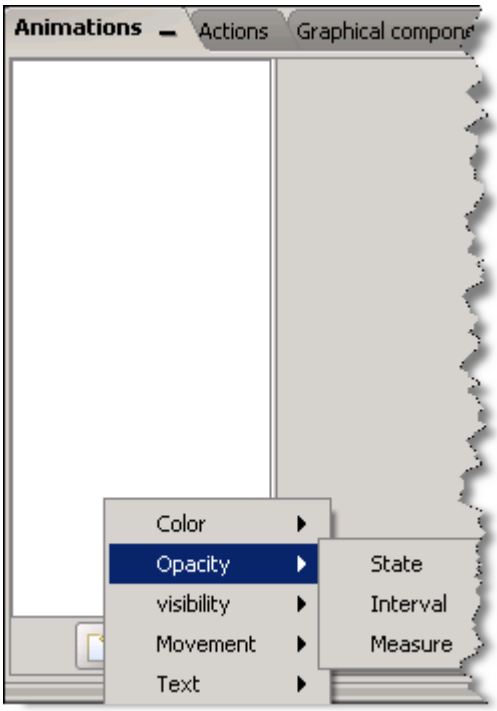


not animated *when animated*

As you can see, the background which should be green disappeared as well as the outline of the background rectangle.

Opacity Animations

In the **Animations** context menu, you will also be able to select an **Opacity** animation (on state, interval and measure).With these animations, you can make your object more or less opaque, depending on the values of a Tag. (Opacity 0 = object is invisible; opacity 0,5 = opacity at 50%; opacity 1 = opacity at 100%).

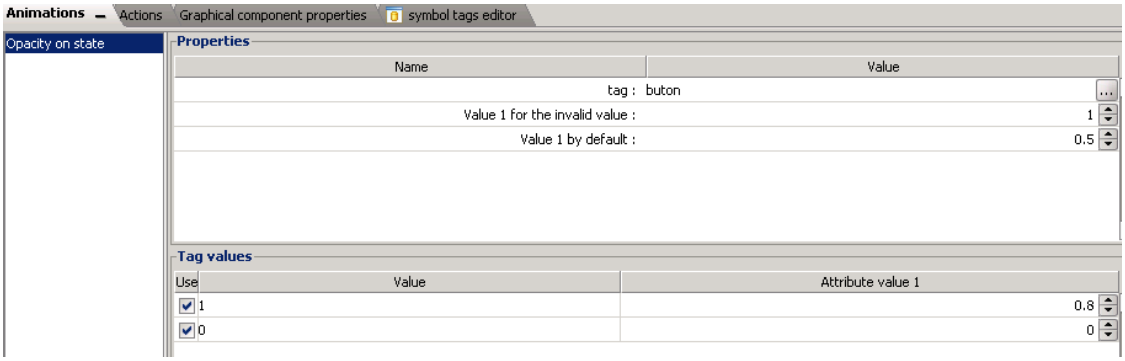


NOTE

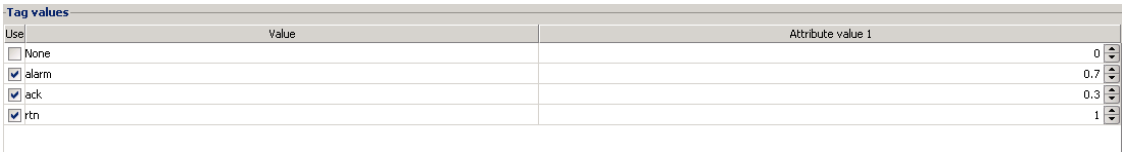
When the value of the Tag is 0, the object becomes invisible, but it still exists. It is possible to click on it if needed.

Opacity on State

The **Opacity on State** is quite similar to the **Color on State**. When you try to link a Tag to your object, only the Boolean Tags will be displayed as it is an animation based on states.



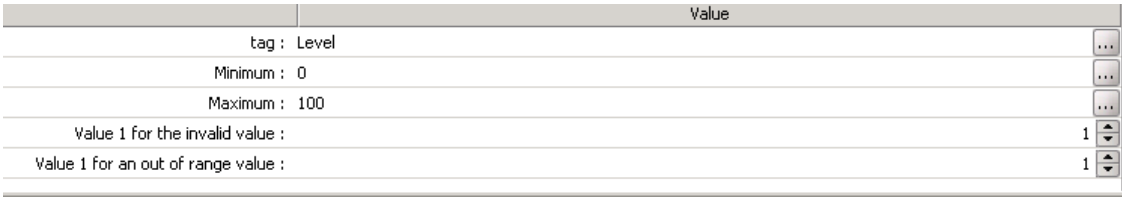
In the **Properties** section, choose the value for the invalid and the default value. In both cases, the maximum is 1. The example in the above picture shows that if the value of a Tag is 1, the object will be 80% opaque. On the other hand, when the value of a Tag is 0, the object becomes invisible.



If you chose to apply the opacity to the alarm state, then you will have to apply a value for each status of the alarm (ALM/RTN/ACK). Do not forget that you can also uncheck the statuses and keep only one of them or none.

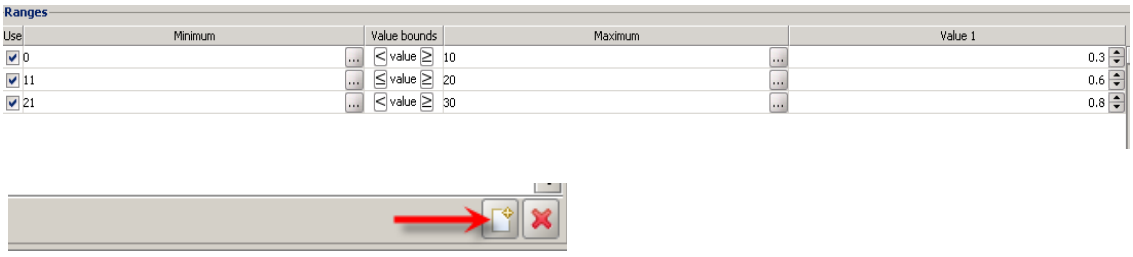
Opacity on Interval

This animation is possible for analog Tags only. In the **Animations** context, select **Opacity** and then **Interval**. You will have to choose a value for the invalid value and for the out of range one. Here again, the maximum is 1 for each of them (100% of opacity). When the value is not defined in the Range section, the object will be 100% opaque. And when the value is out of range, the object will be 100% opaque as well.



Like the **Color on Measure** animation, you will be able to give shaded tones (lighter or darker based on opacity) for different states. If you click on “add” on the right bottom in the **Ranges** section, you will be able to do so.

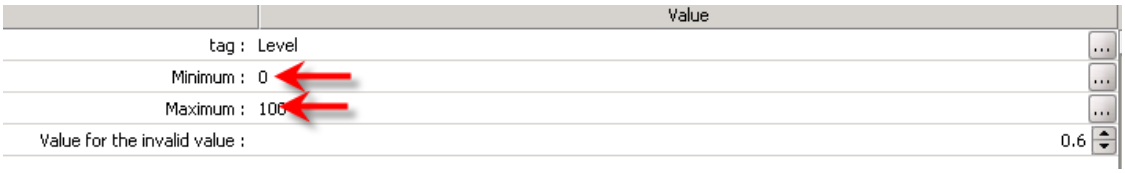
In the example below, you see that if the value of the Tag is between 0 and 10 (included), the object will be 30% opaque; when the value of the Tag is between 11 (included) and 20 (included), the object will be 60% opaque and when the value is above 21 until 30 (included) the object will be 80% opaque.



According to the value that you have introduced for each range, the object will be more or less opaque.

Opacity on Measure

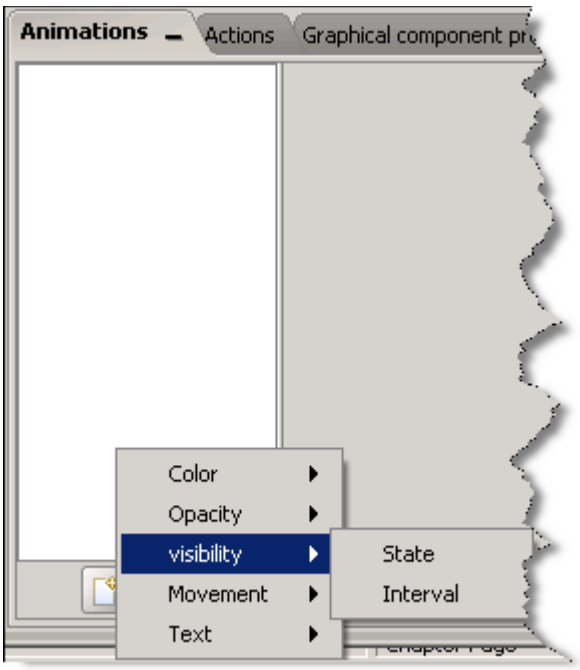
In the **Animations** context, choose **Opacity on Measure**. Add a Tag to your object. Again, only the analog Tags are taken into account. The minimum is 0 and the maximum is 100 by default. When the value of the Tag linked to the object is 0, the object is invisible. When the value of the Tag is 100, then the object will be 100% opaque.



When the value of the linked Tag is less than 0 and more than 100, then the object will 60% opaque (**Invalid value**)

Visibility Animations

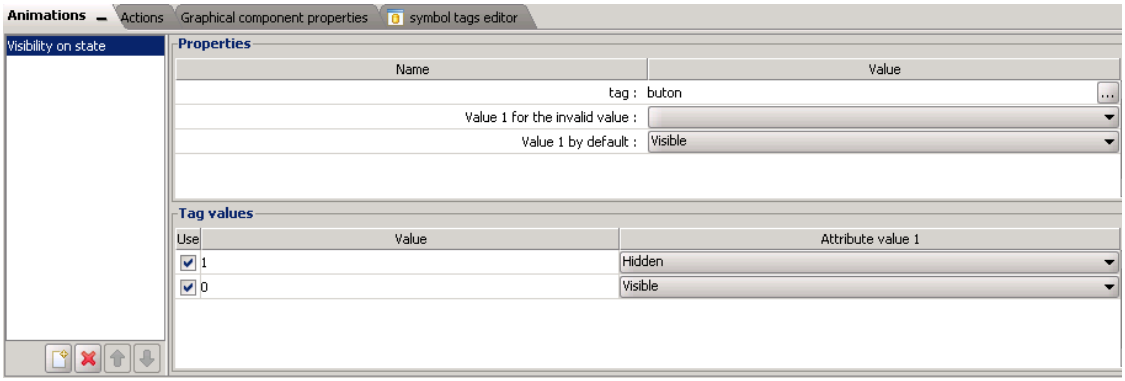
Thanks to viewON, you can choose to make your object visible or invisible according to its state.



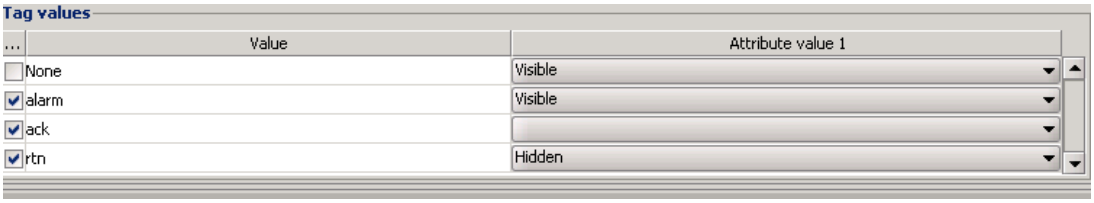
Bear in mind that, in opposition to the **Opacity on State**, when the object is invisible, you cannot click on it anymore. When visible again, you can click on the object again.

Visibility on State

Here, only the Boolean Tags are available (except if you choose to link the visibility to the alarm status). If you choose a Boolean Tag, then you will only have two options: if the value is 0, the object is visible; if the value is 1, the object is invisible or vice versa.

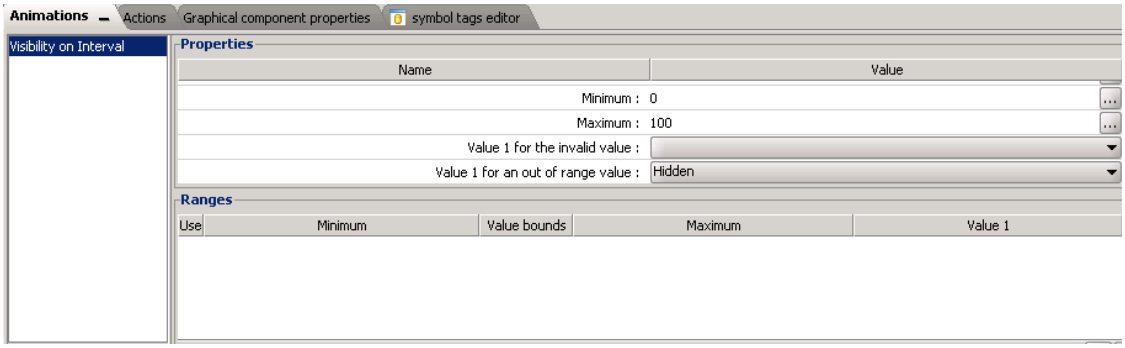


In case that you have decided to use the alarm states (ALM/RTN/ACK), then, you will be able to assign a visible state to each alarm state. Do not forget that you can also uncheck the statuses and keep only one of them or none.

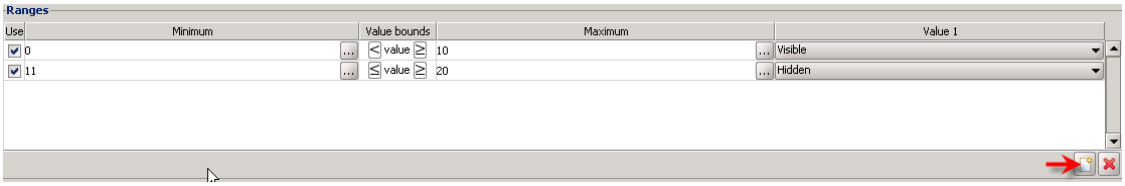


Visibility on Interval

In this case, only analog Tags are considered. Choose a Tag that you want to add to this animation and give a value to the invalid value (visible or hidden). Do the same with the out of range value.



As in the **Opacity on interval**, where you are able to give shades (lighter or darker) to the different states, this animation gives you the possibility to hide or unhide your object. If you click on “add” on the right bottom in the **Ranges** section, you will be able to do so.

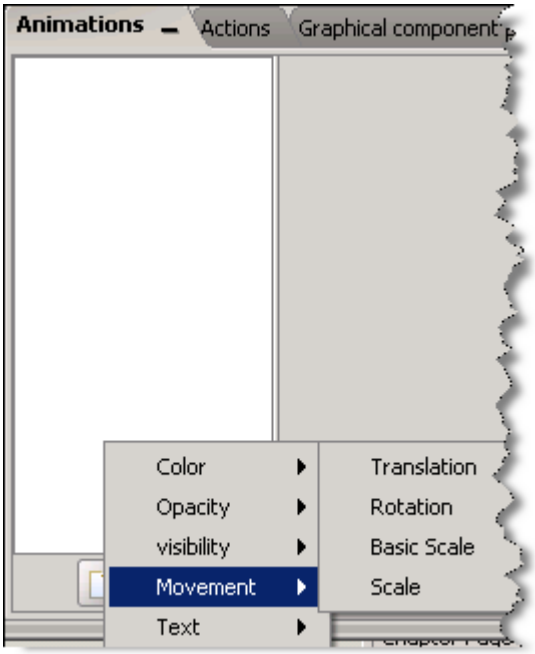


You have to enter values in the **Ranges** section to be able to make your object visible or hidden for different value bounds. For instance, according to the value (visible or hidden) that you have introduced for each range, the object will be visible or not.

In our example the object will be visible when the value of the linked Tag is less or equal to 10 and hidden when the value of the linked Tag is greater or equal to 11 until 20 (included). But for values which are not defined in the **Ranges**, the out of range value will be applied.

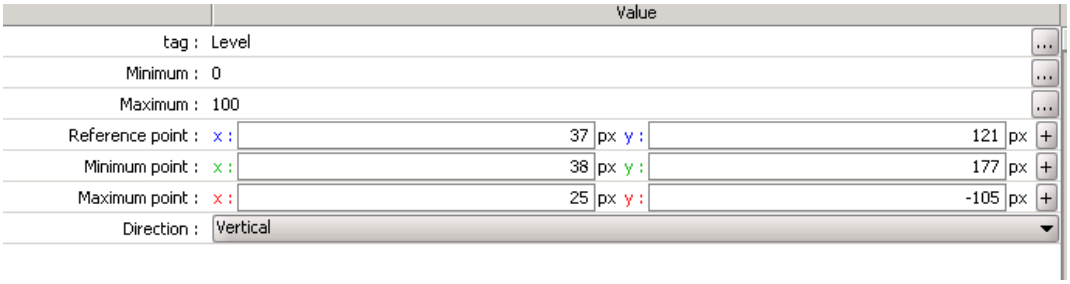
Movement Animations

Thanks to the **Movement** animations, you can make an object move from one point to another by introducing a certain number of points (reference point, minimum point, maximum point, center point). By default (0 pixel), all those points are on the upper left corner of the object.

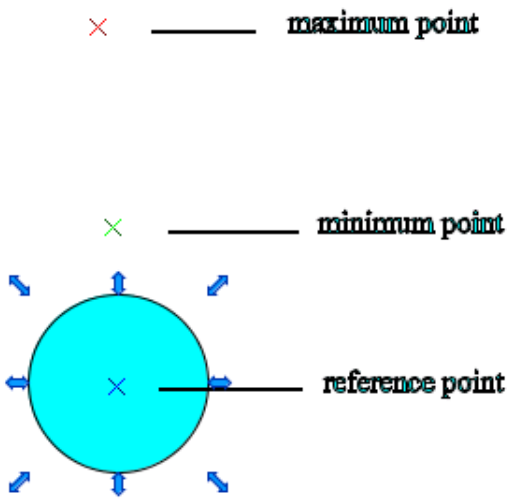


Translation

For the **Translation**, only the analog Tags are taken into account. Once you have selected a Tag, you will have to choose a reference point, a minimum point and a maximum point. To do so, click on **+** (next to each point field) to select those points (x and y) and click on the **View** to place them where you want.

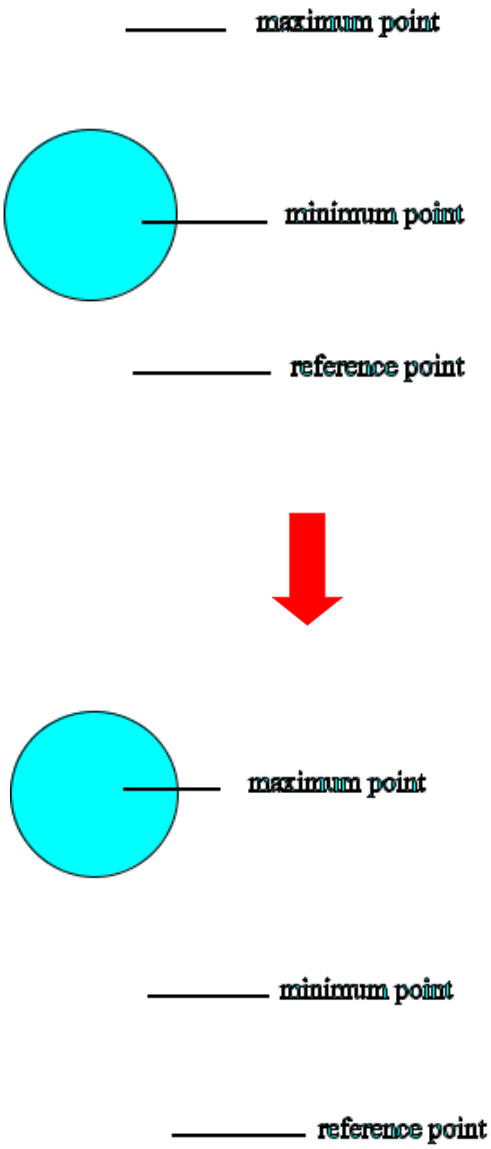


Do not forget to click on the View to insert each point.



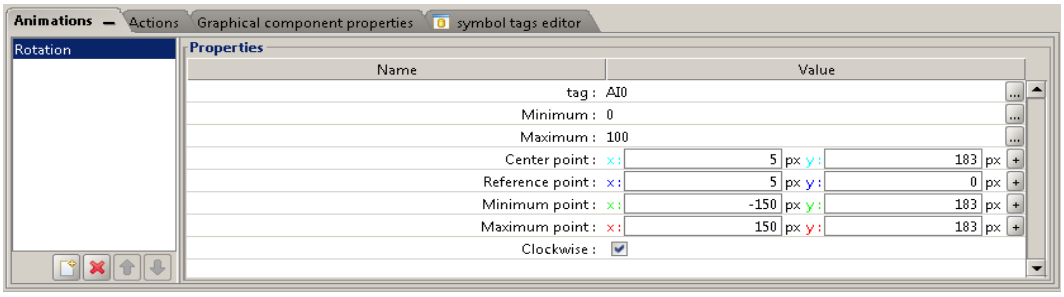
Finally, choose the direction you want the object to move (horizontal/vertical/both). If the minimum point of the Tag is 0 and the maximum is 100, then the object (the reference point) will move linearly from the minimum to the maximum. But if the value is under 0 or above 100, then the object will return to its initial position.

In the following example of a ball translating, when the value of the Tag is 0, the reference point goes to the minimum point. When the value of the Tag is 100, the reference point goes to the maximum point.

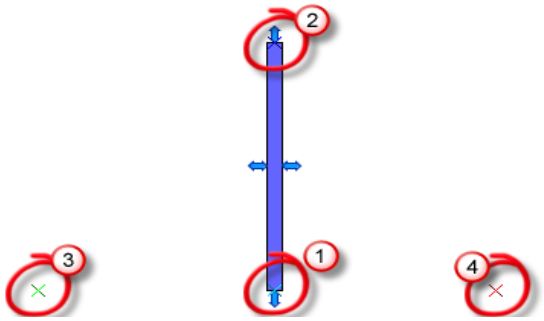


Rotation

Once again, choose, first of all, the Tag you want to link to this animation. Only analog Tags are available. As in the **Translation** part, you will have to insert a reference point, a minimum point, a maximum point, BUT also, a center point. To do so, click on **+** (next to each point field) to select those points (x and y) and click on the **View** to place them where you want. The center point is the point around which your object will rotate. The reference point is the point which, associated to the center point, creates an invisible “line” that rotates from the minimum point (when value = minimum) to the maximum point (when value = maximum). When an invalid or out of range value is received, the object keeps its initial state (rotation angle = 0) and a Warning symbol is displayed.



Do not forget to click on the **View** to insert each point.



1. Center Point
2. Reference Point
3. Minimum Point
4. Maximum Point

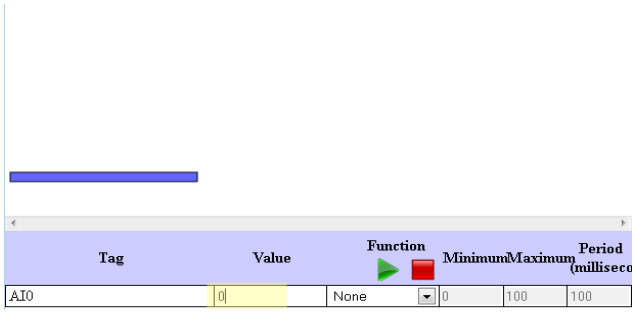
IMPORTANT

The reference and center point must be different by at least 1 pixel, otherwise, the animation will not work.

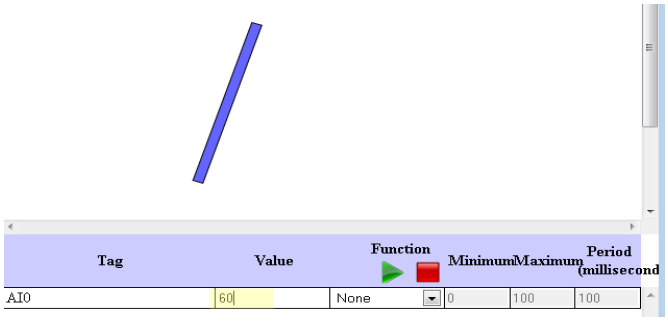
Finally, check if you want the rotation to be clockwise or counterclockwise.

Below is an example of **Rotation**:

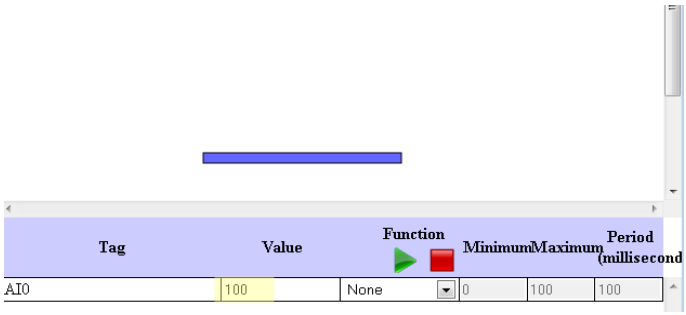
Value = 0



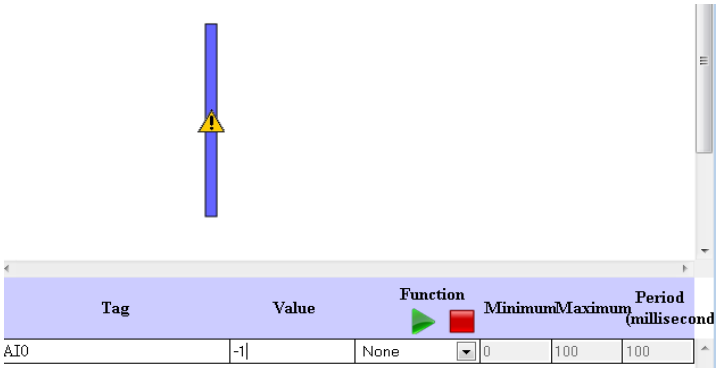
Value = 60



Value = 100



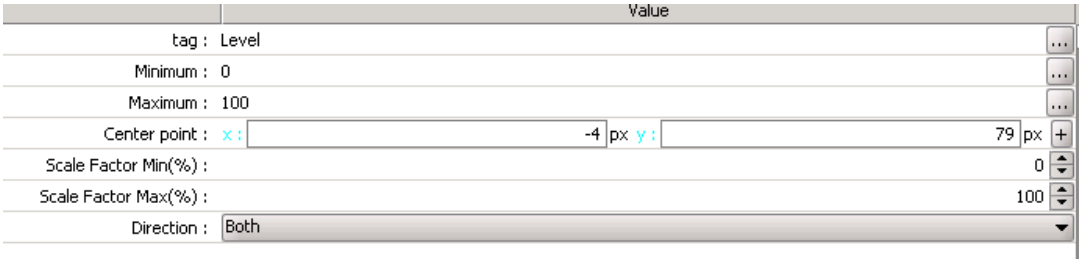
Out of range/Invalid Value



Basic Scale

The **Basic Scale** is only possible for analog Tags. This animation makes your object size increase or decrease according to a Scale Factor number and a “center point” reference.

A **Scale Factor** of 0 means that the object disappears. A **Scale Factor** of 100, the object has its original size. If you want the object to grow, you will have to enter a number greater than 100 in the **Scale Factor Max** field.

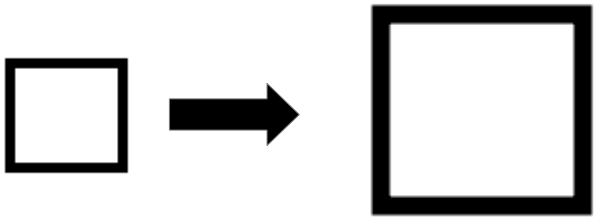


For instance, if you insert 200 (in the **Scale Factor Max** field), then the object will be double-sized.

Do not forget that if the value of the Tag is out of range (below 0 or above 100 in the above example), nothing will happen to your object. When **Scale Factor Min** is 100 and the value of the Tag is 0, the object will not move. Instead, if the **Scale Factor Max** is 200 and the value of the Tag is 100, the object will be double-sized.

The center point coordinates start from the left/top of the object (0 px, 0px). So if you want to use the center of the object as reference, use “width / 2” and “height / 2” as coordinates. By clicking the “+” button, viewON allows you to define the coordinates by clicking on the view directly.

Finally, choose the direction you want your object to grow (vertical/horizontal/both).

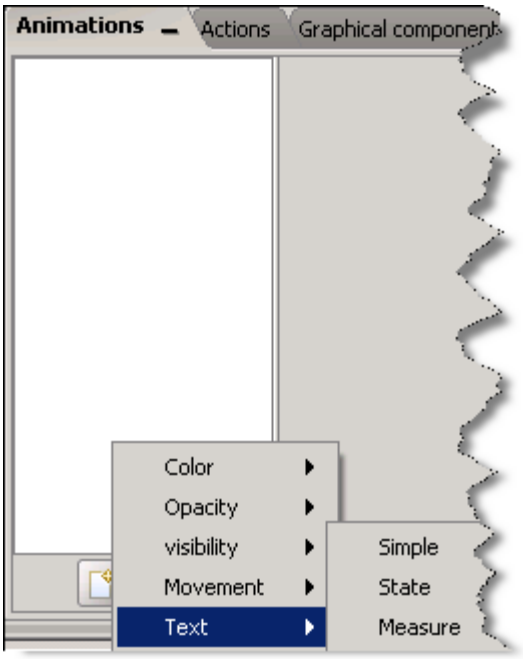


Scale

The Scale animation process is similar to the **Basic Scale**, except that you also have to pick a reference point, a minimum point and a maximum point. These three additional points allows to calculate the scale factor of the scale effect. The **Basic Scale** is more commonly used as it is easier to configure, but sometimes, the **Scale** animation can be useful when more complex animations are needed.

Text Animations

The **Text Animations** allows you to display a text on your project. There are three different text animations.



Text Simple

Here, you will not have the possibility to select a Tag as the eWON does not handle string Tags. You will have to use a Script. As you may know the eWON integrates a programming language close to BASIC. This animation gives you the opportunity to ask the eWON to display a specific text (for example, the time and date) once your object has been exported to the eWON.

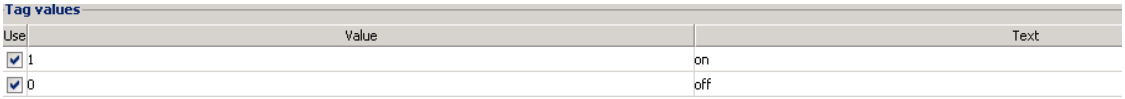
Below is an example of a Script:

For more information on the eWON's BASIC scripting syntax, please refer to the Script Chapter at the end of this document.

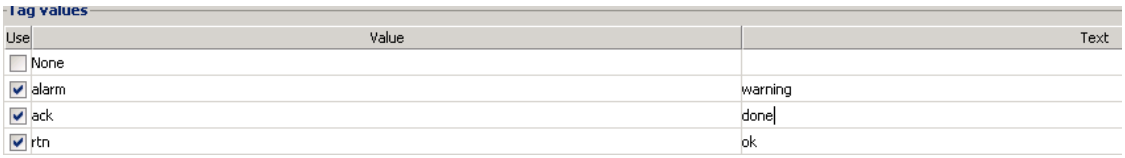
Text on State

You can link Boolean Tags or alarm states to this animation. Thanks to the **Text on State**, you will be able to give a text of each status.

For example: If the value of the Tag is 0 ⇨ OFF and when the value is 1 ⇨ ON.

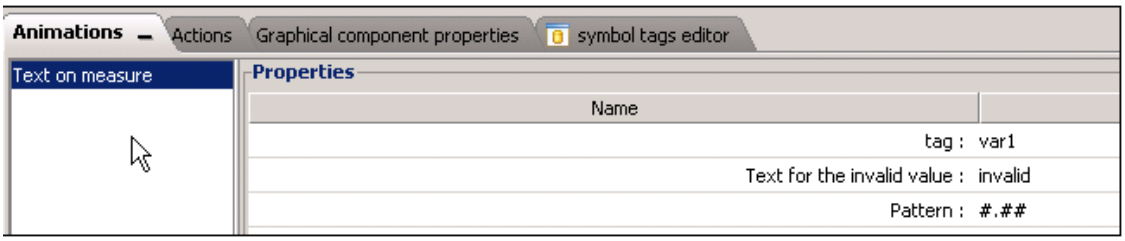


But as for other animations, you can choose to attribute a filter, alarm state, for example. Similar to the **Color of state** process, if you choose to attribute a filter, you will be able to add text for each alarm status (ALM/RTN/ACK). Do not forget that you can also uncheck the statuses and keep only some of them.



Text on Measure

This animation is only for analog Tags. The **Text on Measure** is used to display a text or data according to the value (temperature, for instance) of a Tag. Choose a Tag in the list. In the invalid text value, enter the text for the invalid state. In the **Pattern** field, you can define how many digits you want to display.



You can also add a text like “Temperature is”

Example:

Temperature is 15.68 Temperature is 30.31

NOTE

Attention, if you display a negative value using a pattern including text, the minus sign will not be placed in front of the digits, but before “Temperature” : **- Temperature is 15,68.**

Below is a list of the pattern symbols:

Symbol	Location	Meaning
0	Number	Digit
#	Number	Digit, zero shows absent
.	Number	Decimal separator or monetary decimal separator
,	Number	Grouping separator
E	Number	Separates mantissa and exponent in scientific notation (**ex**: #.##E00)
%	Prefix or suffix	Multiply by 100 and shows a percentage
'	Prefix or suffix	Used to quote special characters in a prefix or suffix, for example, “ ' # ' # ” formats 123 to “ #123 ”. To create a single quote itself, use two in a row: “ # o''clock ”

Please pay attention to the patterns. Depending on what you write in this field, the result will different:

Value	#	#.##	000	#.000
123	123	123	123	123.000
123.326	123	123.33	123	123.326
10	10	10	010	10.000
1234	1234	1234	234	1234.000

NOTE

If you use the following “ #.00 'in.' ” You have to put *in.* (for inch) between quotes otherwise the dot will be considered as decimal separator.

Animation Simulation

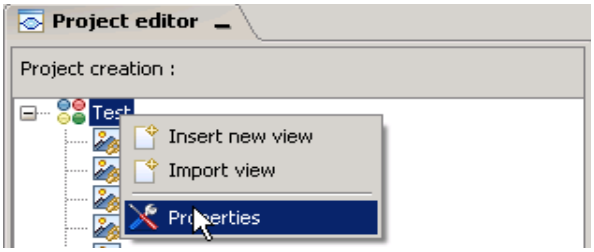
Thanks to the **Animation test,** you will be able to check if your animation works as you would like it to work before exporting it to your eWON.

Once you have applied an animation to your object, click on the “Test animations and actions” in the viewON toolbar. viewON will ask you to save your file as otherwise the animation will not work.

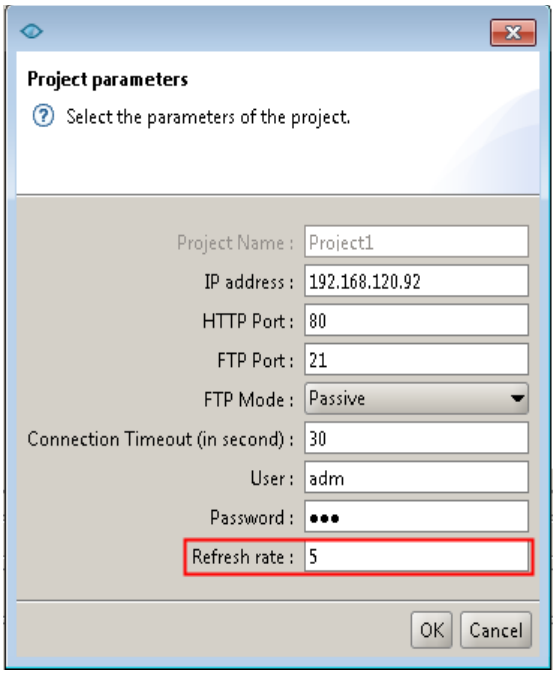
NOTE When you have just created a View, make sure to save your Project, otherwise the animation test will not work.

Be aware that the animation displayed in the **Animation test** will be slightly different on the eWON web page. Indeed, the **Animation test** does not take the refresh rate into account when you simulate your animations. However, the eWON uses the refresh rate you have chosen in the project properties. That is the reason why your animation will be slower and jerky.

To modify the refresh rate in viewON, all you have to do is right-click on your project and choose **Properties**.



The following window will open, where you can change the refresh rate:

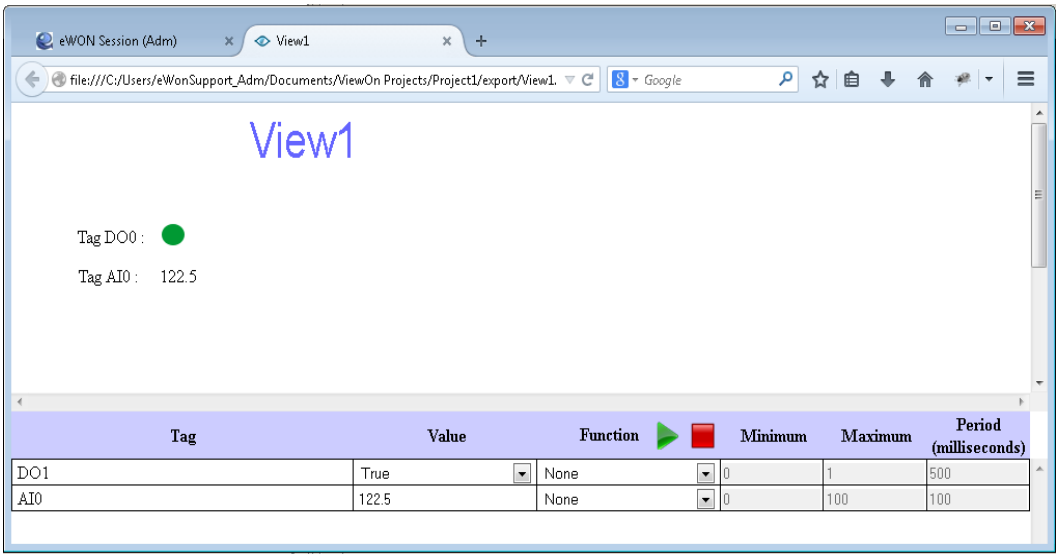


Be aware that the **Refresh rate** should correspond to your bandwidth speed (LAN or GPRS).

Example:

Over LAN, you can choose a refresh rate of 1 second

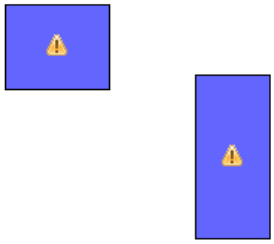
Over GPRS, you have to choose at least a refresh rate of 5 seconds (otherwise you would uselessly overload the COM as the connection link does not allow a faster refresh rate).



When you are in the **application simulator** in your browser, you will see your objects. To test if the animations work, you will have to introduce values in the lower part of the screen. Insert a value in the **Value** column

You can also choose to animate the tag using another **Function** (Ramp or Triangle) to change the **Value** permanently. Put valid values in the **Minimum,** a **Maximum** and the **Period** fields. Finally, click on the *Play* button. To stop it, click on the *Stop* buttons.

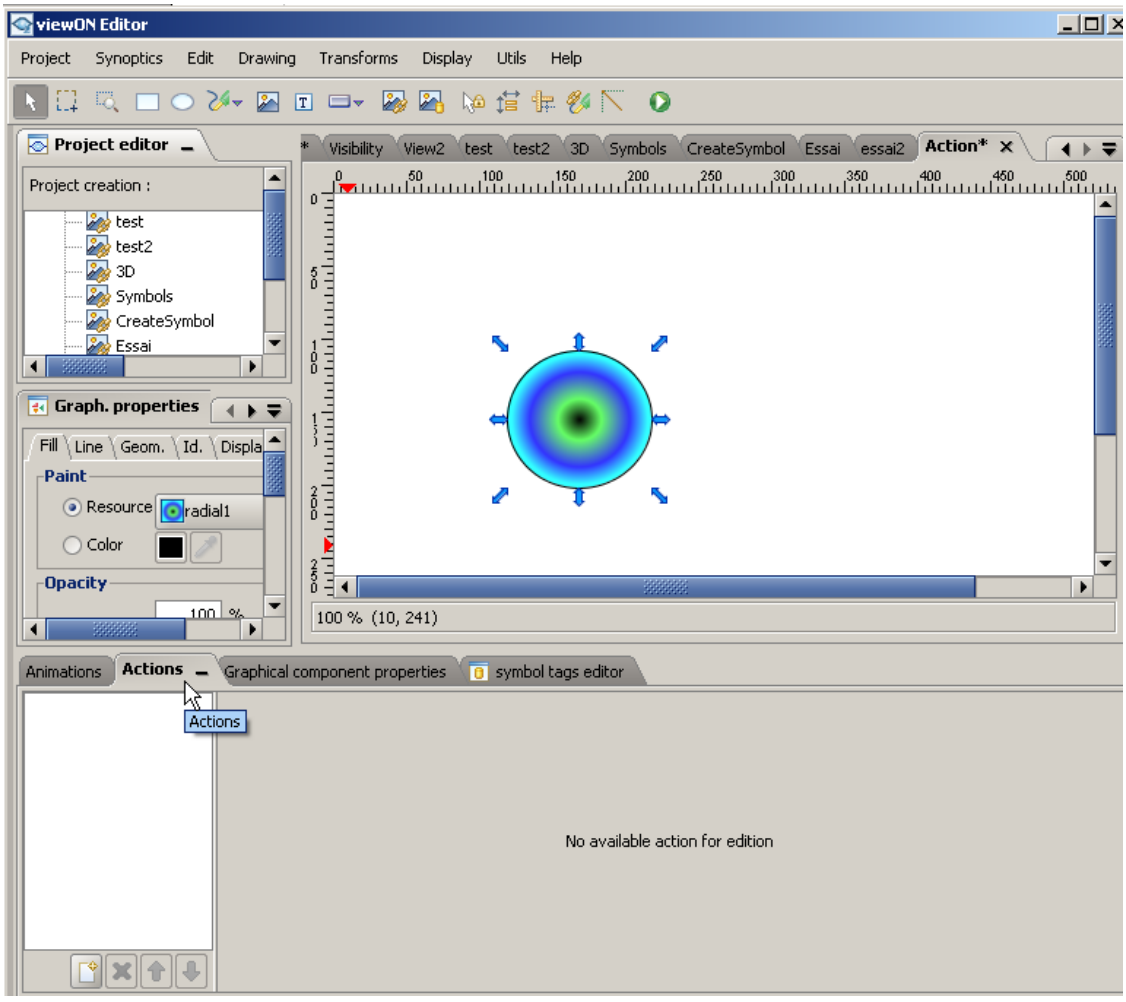
Sometimes, you will see a little warning symbol in your object (see below), this means that the value of the Tag is invalid in viewON. On the other hand, when your project has been exported to your eWON, those warning symbols (displayed on your web page) mean that there is an error in the animation or that the Tag does not exist anymore in the eWON.



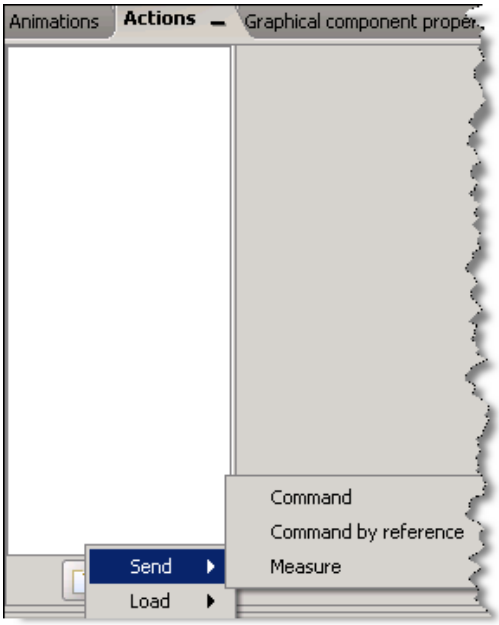
Actions

Introduction

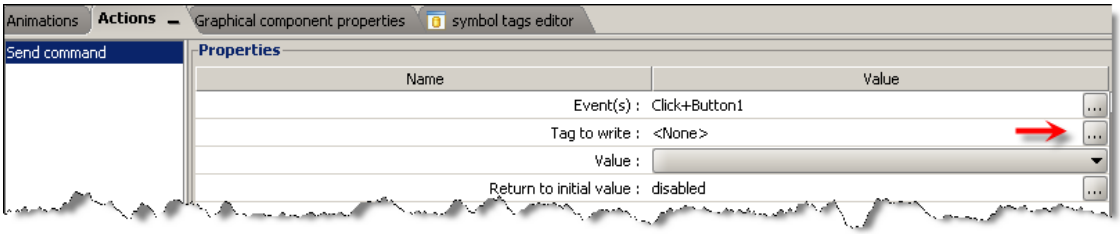
Actions give the possibility to the user to add a command to a selected object. For an action to work, the user has to do something such as clicking on the object. To use an action, click on the **Actions** tab (next to the **Animations** tab) in the second part of the screen.



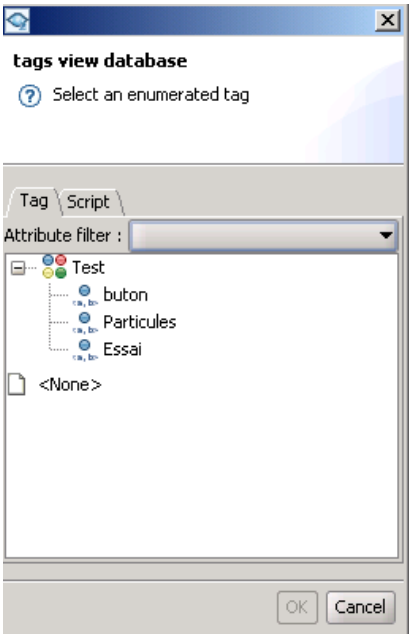
Hereunder, you will find all the actions available in viewON.



Once you have chosen the action, you have to select a Tag to link to this action. To do so, click on the small button next to the **Tag** row.



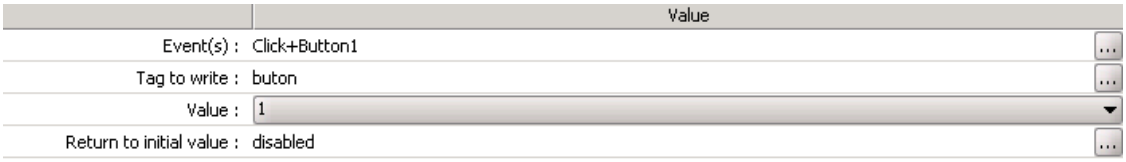
The following window will pop up. It lists all the Tags available for the selected action.



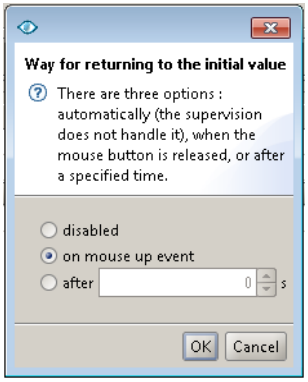
Send

Send Command

The **Send command** action is used to send a value to a Boolean Tag or to execute a Script on the eWON. Select a Tag to write using the ... button. The **Attribute filter** is not available here. Click on **OK**. In the value field choose 0 or 1. This value will be written in the variable associated with the object once the action is executed. In the **Events** field, you can change the type of event that will launch the action (See chapter "Action Events" here under)



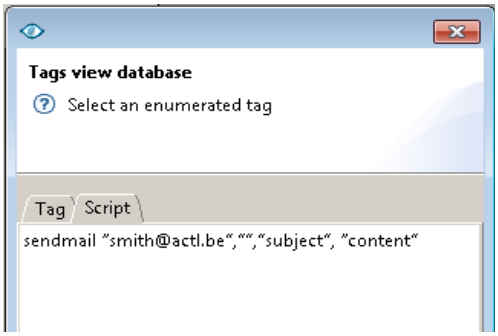
The **Return to initial value** option allows to force viewON to write back automatically the initial value of the Tag after a certain time.
Only for the **Send Command** Action, you also have the possibility to define a "Return To Initial Value" on Mouse Up. This one allows to return to the initial value either when you release the mouse button (if event action is Mouse Down) or when you click anywhere out of the object (if event action is Mouse Click).



Be aware that in the **Tag to write** field, you also have the possibility to write a Script to ask, for example, your eWON to send out an email :

(sendmail “smith@actl.be”,””,”subject”, “content”). So, the eWON will send out an email for your project. The Script will be executed once in the eWON, that is to say, when you click on your object (one click = one email).

Below is an example of a Script:

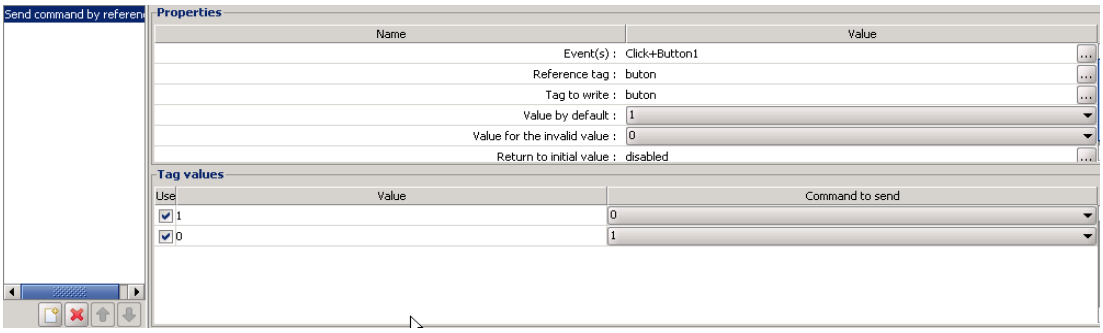


For more information on the eWON's BASIC scripting syntax, please refer to the Script Chapter at the end of this document.

Send Command by Reference

Thanks to this action, you will be able to send the value of a Tag in relation to another Tag. This allows you to create some kind of toggle (sort of button that you can click and unclick).

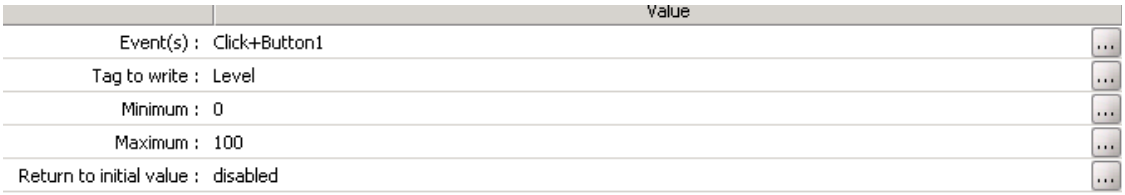
Choose a reference Tag and a Tag to write by using the ... button. This action is only allowed for Boolean Tags. You will be able to use an alarm state by attributing a filter only for **Reference Tag**. To create a toggle button, use the same Tag (for the Reference and the Tag to write). Enter a value in the invalid value and default value fields (1 or 0). In the **Events** field, you can change the type of event that will start the action (See "Action Events" chapter).



Please bear in mind that when the **Send Command by Reference** has been applied to your object, it is also possible to add an animation to your object. If you add the **Color on State** animation (see above for further information), when you click on the object, it will become red and green when you click again.

Send Measure

This action allows you to send a value to the Tag. It is only possible for analog Tags. It is quite similar to the **Send Command action**. Choose a Tag in the list by using the **...** button. In the **Events** field, you can change the type of event that will start the action (See "Action Events" chapter)

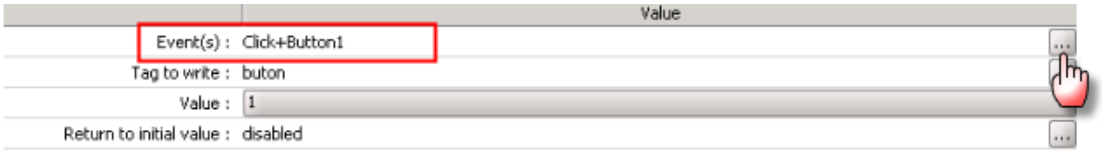


Once you have filled all the fields, click on **Animations test** in the toolbar to test your project before exporting your project to your eWON.

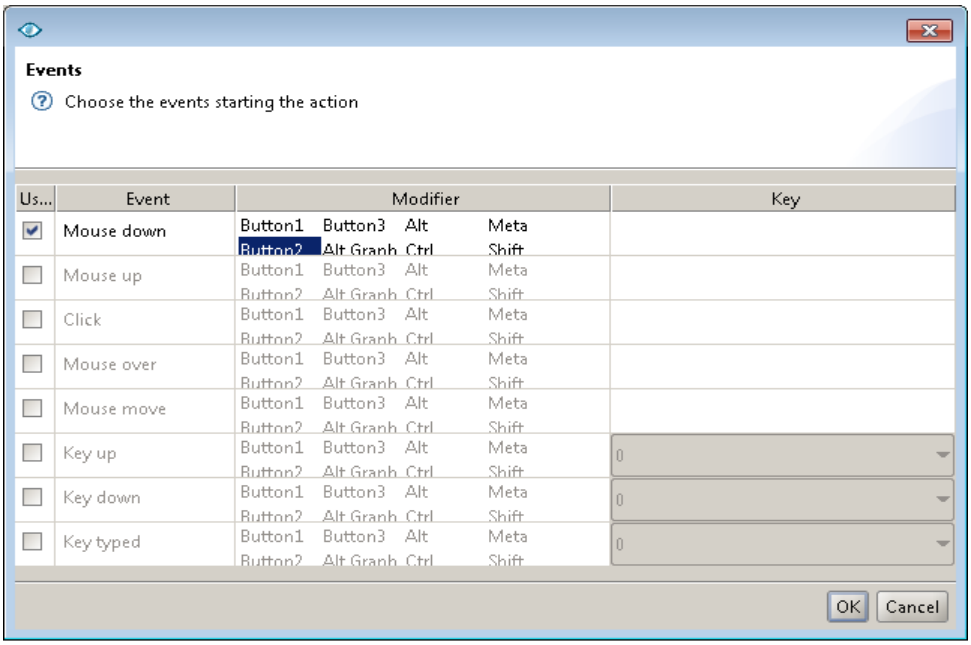
Then, click on the displayed object. A keypad will pop up. Insert a number and click on **OK.** This number will be sent to the Tag.

Action Events

Most of the action commands allow you to specify the Event which will trigger the action.



By default the mouse click event is selected. But you can also specify other events.



Here is the list of events you can use for configuring your action :

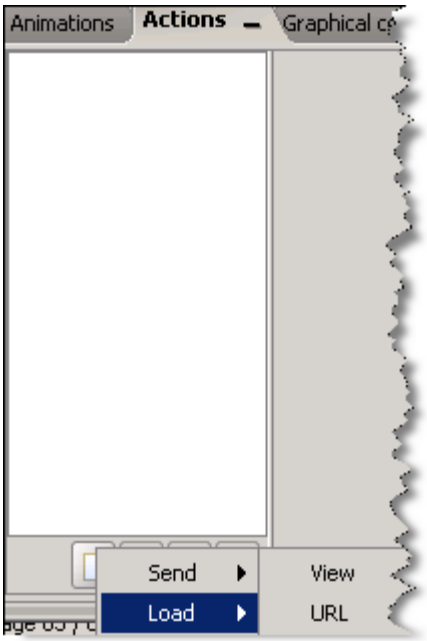
Events	Description	Remark
Mouse Down	Occurs when you press one of the Mouse button and your pointer is on the object. You can define the button to use in the "Modifier" column (Button 1 = left button, Button 2 = center button, Button 3 = right button)	
Mouse Up	Occurs when you release one of the Mouse button and your pointer is on the object. You can define the button to use in the "Modifier" column (Button 1 = left button, Button 2 = center button, Button 3 = right button)	
Click	Occurs when you click on the object. You can define the button to use in the "Modifier" column (Button 1 = left button, Button 2 = center button, Button 3 = right button)	

Mouse Over	Occurs when you pass your mouse pointer over the object. If you select one of the Modifiers, this one must be pressed when your mouse pointer goes over the object to launch the action.	If you configure a writing for this action, you will have plenty of writings as the event occurs every time the mouse moves. It is then to avoid when using slow communication media.
Mouse move	Occurs when you move your mouse pointer over the object. If you select one of the Modifiers, this one must be pressed when your mouse pointer moves on the object to launch the action.	If you configure a writing for this action, you will have plenty of writings as the event occurs every time the mouse moves. It is then to avoid when using slow communication media.
Key up	Occurs when the selected key is released. If you select a Modifier, this one must be pressed while releasing the selected key.	Do not use an shortcut combination that is already used by your browser. (Ex : CTRL + A, ALT + F4,...)
Key down	Occurs when the selected key is pressed. If you select a Modifier, this one must be pressed while pressing the selected key.	Do not use an shortcut combination that is already used by your browser. (Ex : CTRL + A, ALT + F4,...)
Key typed	Occurs when the selected key are typed together. If you select a Modifier, this one must be pressed while typing the selected key.	Do not use an shortcut combination that is already used by your browser. (Ex : CTRL + A, ALT + F4,...)

Note: Events are ONLY available for geometric objects such as Symbols, Rectangle,... and not for graphical components.

Load

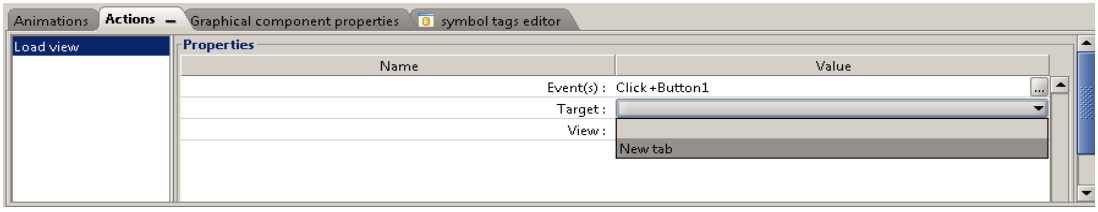
This action allows you to open a view or display a URL, simply by clicking on your object.



Load View

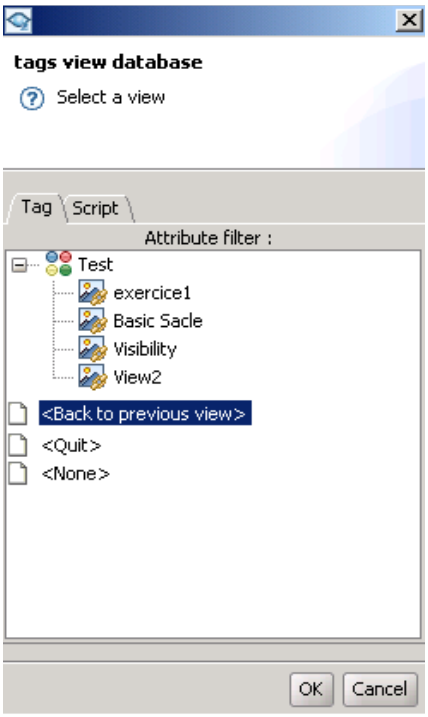
With this action you can open a View only by clicking on your object (like on a website, you have a button, if you click on it, then another window opens).

In the **View** field, select the View you want to open by using the **...** button. The **Target** field can stay empty. In the **Events** field, you can change the type of event that will start the action (mouse up, mouse down click,...). Please be aware that some **Events** may not work with your environment (depending on your system).

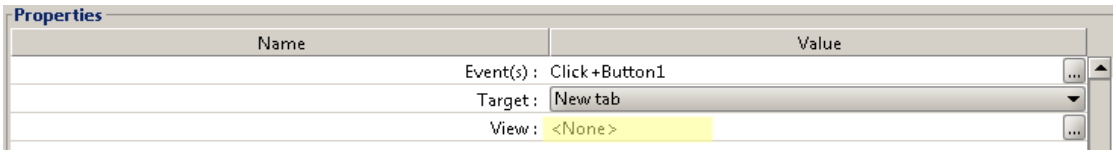


Then in the **Target** field, choose where you want this page to be opened. If you leave the **Target** field empty, the new page will replace the current page in the browser. If you select New tab in the **Target** field, a new tab will be created in the browser.

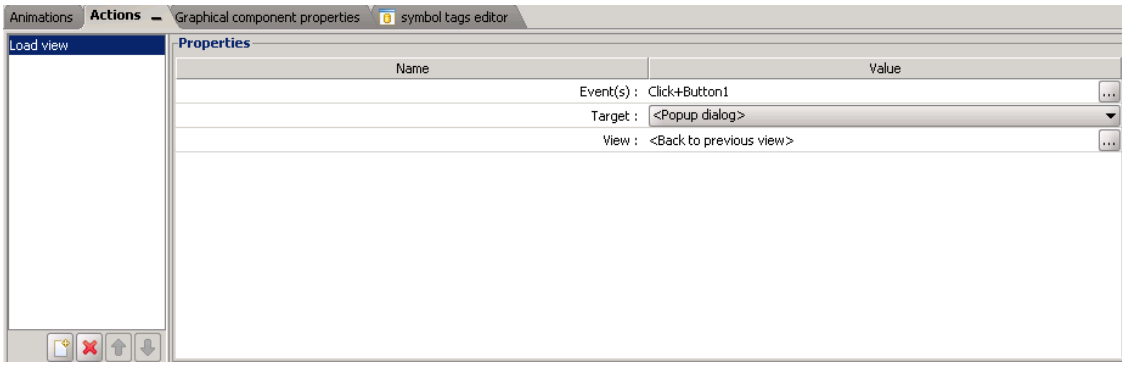
The Load View action allows you also to Go Back to the previous View, etc. Those options are very useful as you will not be able to go back to the previous View, except if you have made sure that another object with the action “**Back to previous view**” had been selected as shown in the following picture:



To make the above window appear, click on the button next to the **View** field. Once the **Tags View Database** window opens, you can select the Views you want to open.

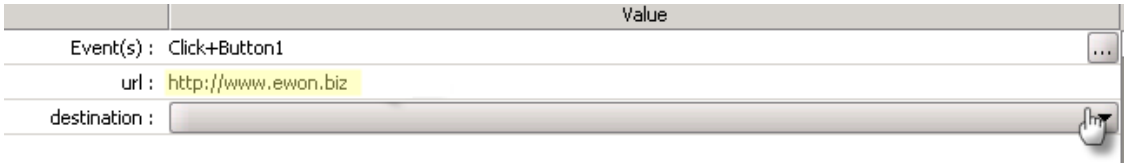


Let us imagine that on your View, you have an object redirecting to “exercice1”, on this View (exercice1), you can create an object linked to “**Back to previous view**”. When you are on “exercice1”, you will be able to go back to the previous View by clicking on this object.

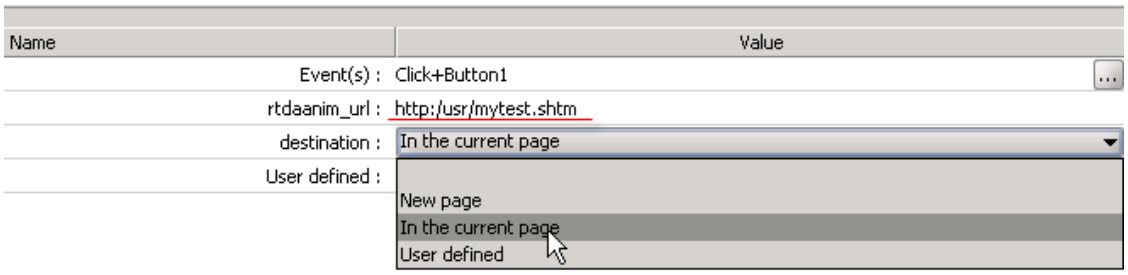


Load URL

This action allows you to display a web page by clicking on your object. In the "**url**" field, type the URL of the web page to open.



Then in the "**Destination**" field, choose where you want this page to be opened. If you select "In the current page", then this page will be replaced by the new one. If you select "New page", then a new window is opened in a new tab. In the **Events** field, you can change the type of event that will start the action (mouse up, mouse down click,...). Please be aware that some **Events** may not work with your environment (depending on your system).



NOTE You can also display a user defined web page of your eWON. To do so, pay attention, you have to type "**http:/usr**" (only one slash).

Alternative Layout

This action can be seen as a web redirection of a view depending on the screen resolution. Users may want to have a main view and an alternative one (of the same view) dedicated for mobile devices.

This is easily done on the client side, in viewON, thanks to javascript.

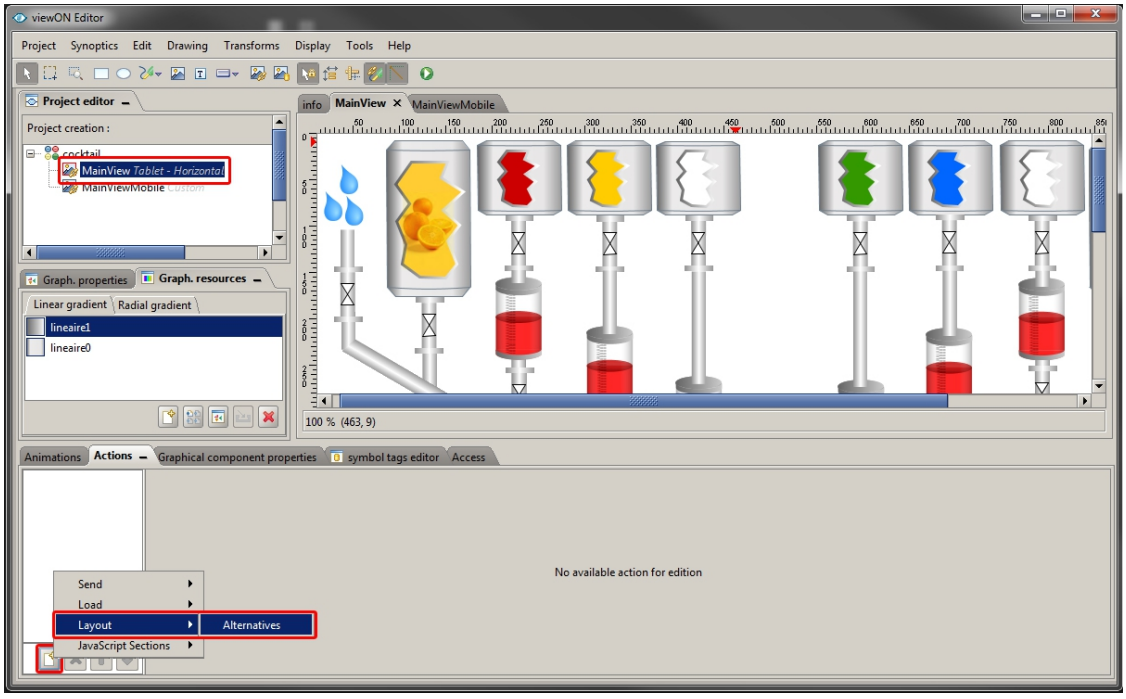
Let's say the project has following two views:

- MainView
- MainViewMobile

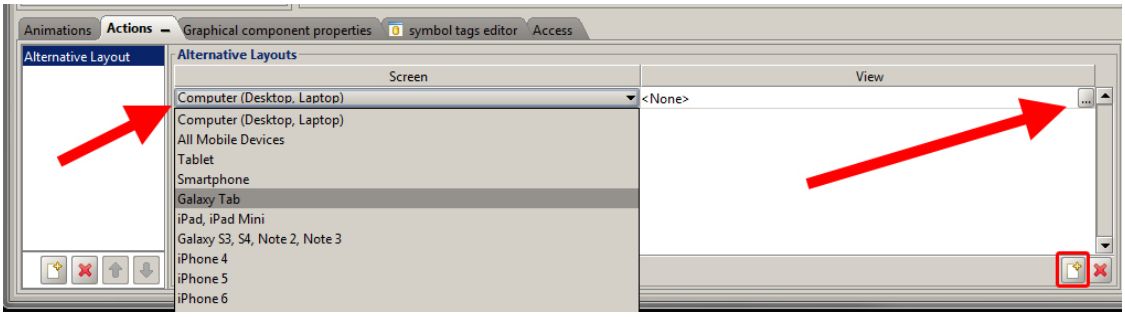
The user may want to redirect MainView.shtm to MainViewMobile.shtm when the first one is displayed on a mobile device. Several reasons for that:

- Too much data consumption on MainView, need to reduce page weight for cellular connection
- As it is a smaller sceen, there's a need of less information to be displayed
- …

To add an alternative layout, highlight the view you want a redirection on and add an action:



Once the action selected, target the screen resolution you want the redirection to link to.

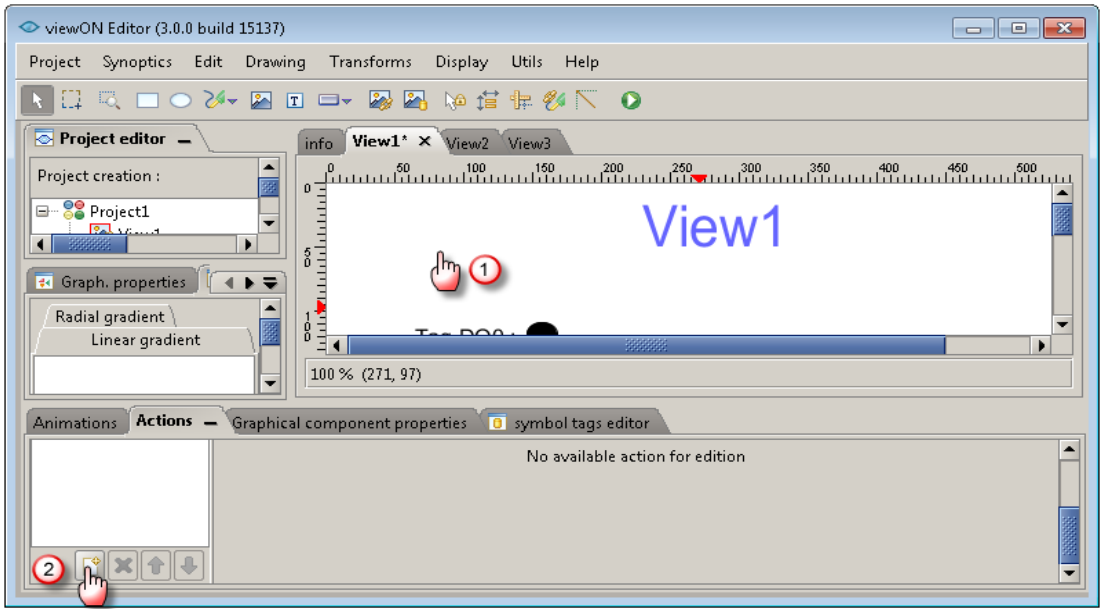


When the project is saved and exported to the eWON, 3 files will be rendered:

- MainView.shtm: This page is an empty page only with the redirect config. It redirects the users to MainView.shtm or MainViewMobile.shtm depending on the devices screen resolution you are accessing the web page from.
- MainView_.shtm: This page has the real content of the main view.
- MainViewMobile.shtm: This page is being loaded instead of Main Window_shtm if you are on an Galaxy Tab (or similar screen resolution).

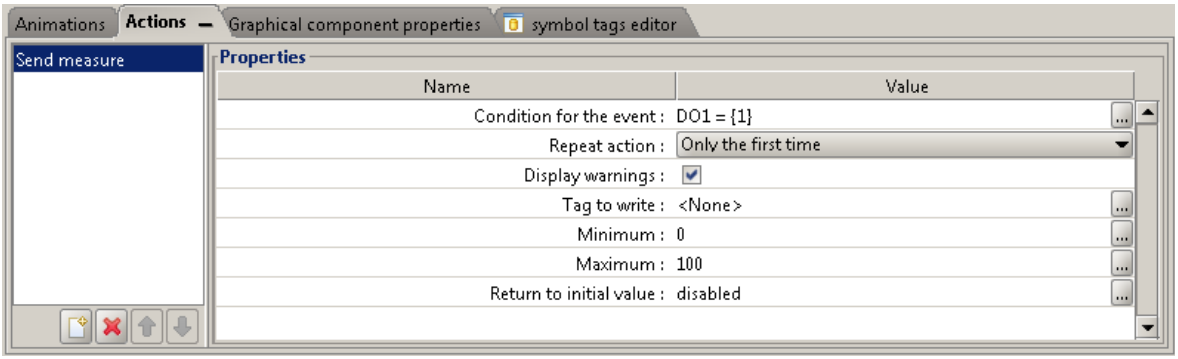
Global Actions

viewON provides a way to declare actions in the page without the need to create an object. For this, you have to select the global view and select Actions :

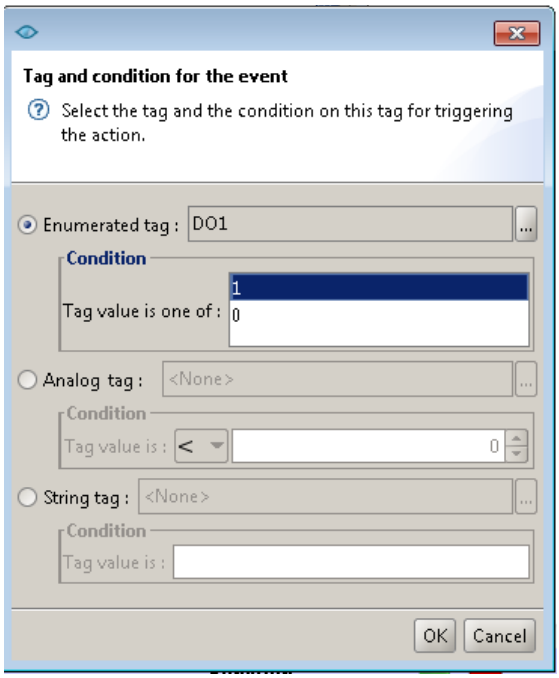


The actions you can declare in this window are similar to the ones that you can declare for the objects except that you have to define the condition that will generate the action and whether you want to perform the action once or every time the condition is true.

Take for example a “Send Measure Command” action :



First you need to define the condition that starts the action :



You can then use for your condition an enumerated tag (Boolean, Alarm Status, Alarm Type) or an analog tag.
You can also use a Script and the format of the result of the Script must correspond to the type of tag selected. In this case, “string tag” option can be used when the result of the script is a string.

viewON Script

viewON allows to exchange data with the eWON not only by using eWON Tags but also by using eWON scripting. Using the **Script** you will be able to extend the viewON animation and action.

Excluding some exceptions, the syntax to use for the scripting is the same as the one used for the Basic Script of the eWON (Please refer to the **Programming Guide** pdf file (**RG-002-0-EN**) on our website: http://support.ewon.biz)

Script for animation

Instead of using a Tag value or a Tag status for the animation, you can also animate your object by using a **Script**.

This script will then be executed on the eWON at every refresh of the viewON view which contains the animation. (So at every refresh rate)

NOTE

Exchanges between the viewON application and the eWON Basic Script are realized by the BASIC variable «viewon!».

The «viewon!» variable is of type string!

Taking into account that the «viewon!» variable is of type string, the following script could be associated to an animation:

viewon! = Time$

to retrieve the date and time of the eWON

viewon! = STR$ (Tag1@ + Tag2@ - Tag3@)

to retrieve the result of the Tag value addition and subtraction

viewon! = A$

to retrieve the Basic string variable A$.

Script for actions

You can also associate a **Script** to an action. So, instead of setting directly the value of a Tag, you can also run an eWON script every time the action is performed.

For the action script you do not need to use the «viewon!» variable because the action does not need to read the value back from the eWON (except for some Graphical Components).

Example of possible action scripts:

sendmail "Myaddress@email.com", "", "Mail Subject", "Mail Contents"

to send out a mail

SENDSMS "0476224618,GSM,0" , "SMS Contents"

to send out an SMS

Or even a more complex script like following:

```
SETSYS TAG,"load", "Tag1"
SETSYS TAG,"STO","0476412341234,GSM,0"
SETSYS TAG,"save"
cfgsave
```

This script will change the SMS destination number for the alarm notification of the Tag named «Tag1»

IMPORTANT

If you need to use the '+' character in the Action you send to the eWON, then you will have to replace the '+' with '%2B' character, otherwise an eWON script error will be generated and the action will not be correctly executed.

Ex: use **Tag1@ = Tag2@ %2B Tag3@** instead of **Tag1@ = Tag2@ + Tag3@**

For further information on the eWON's Basic scripting syntax, please refer to our Programming Reference Guide (**RG-002-0-EN**) available on our website : http://support.ewon.biz.

Revisions

Revision Level	Date	Description
3	01/09/14	First release for viewon software revision 3

i Microsoft, Internet Explorer and Windows are either registered trademarks or trademarks of Microsoft Corporation

ii Firefox is a trademark of the Mozilla Foundation

Document build number: *67*

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