As the title of this multimedia page suggests, it has to do with using graphics in SVG format (Scalable Vector Graphics) in order to create interactive multimedia resources which could later be executed from any browser. The most important thing is to have an SVG file having the objects organized according to our interest. Most times we use to download files in this format, but perhaps we will need to do some previous action on them, like for example ungrouping the objects that compose it in order to work easily with Ardora. The image below shows an example of an activity based on a timeline including historical events in which if the users place their mouse pointer over a particular year, an event will be activated. You will also notice that the date will be highlighted showing a different colour:
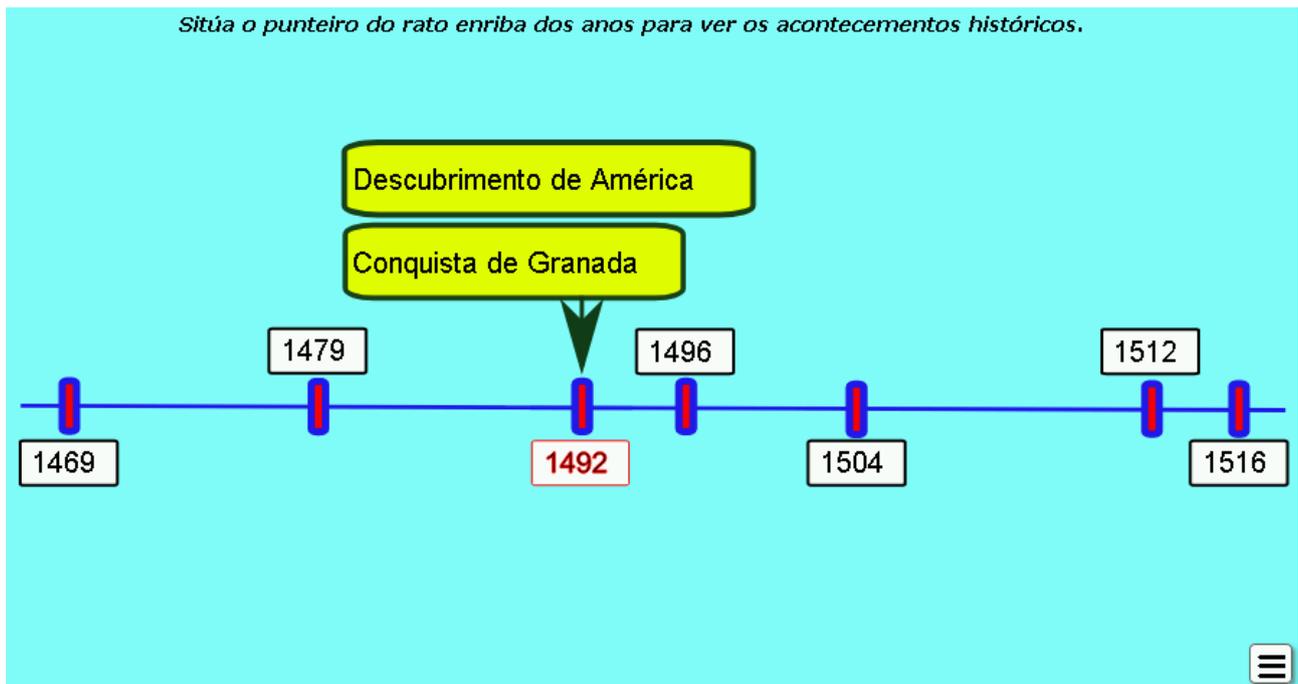

For those users who are not yet familiar with the vector graphics format, we should start by explaining that these are normally made up of individual pieces that are usually shown together as a whole to the user. Ardora allows associating events to the whole set, to specific groups and to each one of the individual pieces that form it. Take into account that before integrating the graphic in the application it is highly recommended to identify the pieces of the graphic which we would like to associate events to and maybe rename those pieces for your convenience.

There are different applications that can help us do this task; one of them would be the free vector drawing software "Inkscape".

First of all, we should open the graphic with this software; then, we will choose some of the elements to which we want to associate an action and we press the right button of the mouse; a pop-up menu will be displayed; there, we should select the option "*Object properties*":
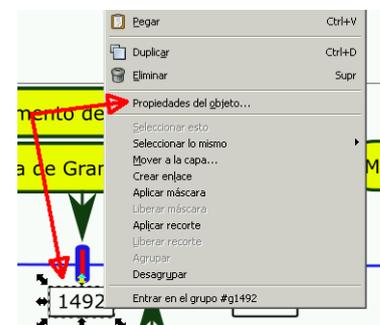
On the right side of the screen, a pop-up window will be displayed. There, we could check and modify the object properties. The field we are mainly interested in is the "*ID*" field, which shows the name identifying that particular piece within the whole set of pieces that are part of the graphic. We can write down this name on a paper just to link it to the related piece we want to work with or, we could also change that name for a more descriptive one, in order to be able to identify it later while working with Ardora. If you decide to change the name on that field, please remember you should click on the button "*Apply*" to save the changes:
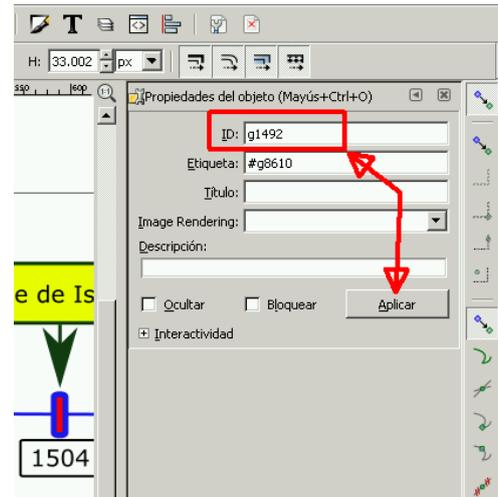
We will proceed the same way with all the objects of the graph we want to associate events to and, once we have registered the objects and their associated "ID", it's time to save the graph and we are ready to import it from Ardora and work with it without any problems.

[NOTE 1]: Most of the time, SVG objects will be grouped into sets of objects that work together as if they were one. If we want to associate an event to a specific object that is part of a group, we should first ungroup the whole set. In order to do that, we need to select it and use the menu "*Object > Ungroup*" or simply use this toolbar button:

[NOTE 2]: Before saving the graphic in Inkscape, it is highly recommended to review the menu "*File > Document properties*" and within the tab "PAGE" check the following data:- "*Units:*" px- "*Resize page to content*": click on the small "+" to the left of the text and then on the button "*Resize page to drawing or selection*". By doing this, we will only see the graphic without any unnecessary adjacent frames:
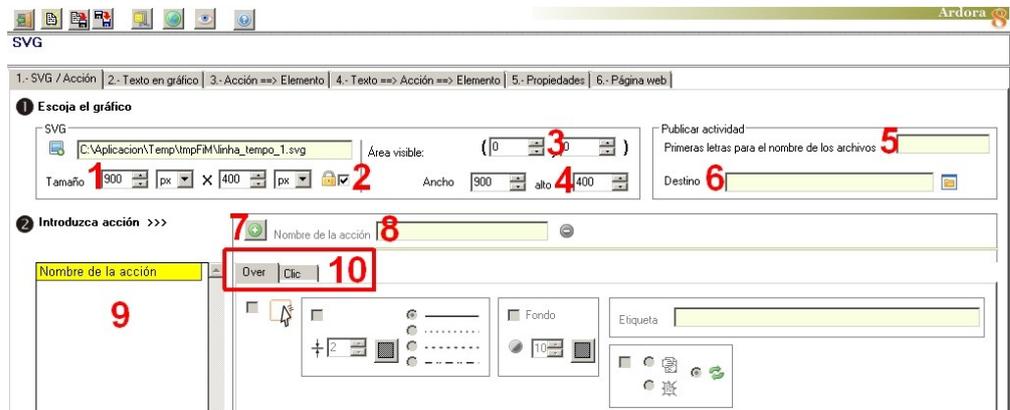
TAB 1: SVG / ACTION

Once we start editing this kind of activity, Ardora shows the content of this first tab, where the first thing we need to do is click on the corresponding button to import the SVG graphic:
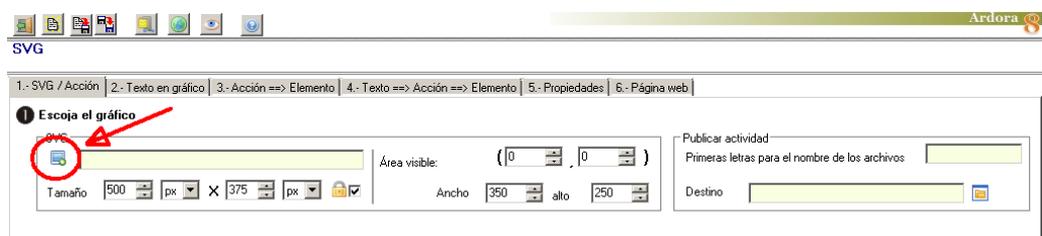
After importing the graphic, the panel will expand and at the bottom of the screen a variety of options will be displayed:

1.- By clicking on the blue button under the acronym SVG a file explorer will be shown so that we can import the graphic we are going to work with; in the yellow field we can see the address where it is located (a temporary location inside one of Ardora's folders) and in the "*Size*" fields the dimensions in pixels which correspond to the width and height of that graphic.

2.- Maybe you have noticed the padlock icon immediately after the dimensions fields. Please remember that this box is not used to maintain the proportions of the graphic, but it operates on the canvas of the page containing the graphic. When the SVG graphic is imported, Ardora automatically creates a canvas/background on the website. This canvas has got the same size as the graph. Therefore, if we check the box with the padlock and vary the width or height, the second measure will be automatically updated to maintain the proportions of the canvas. If the box is unchecked, we will be able to increase the width or height of the canvas individually and the SVG graph will be reduced proportionally until it fits inside the canvas with the proportions indicated.

3-4.- Viewable area: this section will be useful if we only want to see a part of the graphic. The coordinates inside the parenthesis (0,0) indicate the upper left corner of it, and within the fields "*width*" and "*height*" we can indicate the coordinates for the lower right corner of the viewable area. For instance, if we have a graphic with a size of 100 X 100 pixels and we only want to see a fourth part of it in the upper left area, we will indicate the coordinates (0, 0) above and [50] [50] in the lower fields.

5-6.- Publishing the activity: these fields are well known for Ardora users. They perform the same function as in any other activity, package or Ardora multimedia website: we must specify the name of the folder containing the resource when published and the location or folder where it will be published.

7-8.- If you press the button (7) the field (8) will be activated and we will be able to write a descriptive name for an action.

9.- The names of all the actions we create will appear in this table. Later we will be able to associate one or several of these actions to each one of the pieces that form the graph.

10.- Once we have written the name of the action in this field (8), we will be able to set up what will happen whenever the user places the mouse pointer on one of the pieces of the graph ("*Over*" tab) or whenever he clicks on any of them ("*Click*" tab).

"Over" tab:
The users will only have to place their mouse pointer over some of the pieces of the graph so that the action is executed. These are the options we can define:

1. - This box activates the rest of the options. We can activate just some of them (they are not excluding).

2. – By checking this box we can define changes in the thickness, colour and line type of the piece we associate this action to.

3. – By checking this box we can apply colour and transparency changes in the filling of pieces formed by closed curves. We should also bear in mind that this action could be applicable to Bèzier's open curves without being straight, in which the surface between the curve itself and an imaginary straight line that would join the main node with the last node of the curve would be filled.
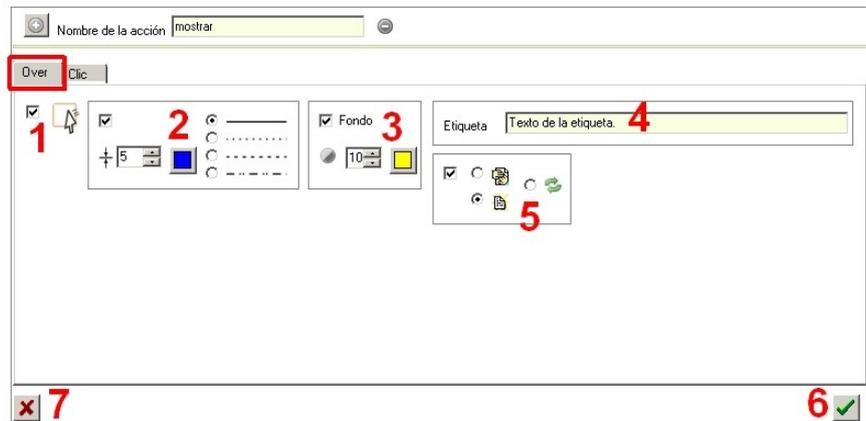
4. - If we write a text in this field, when the action is activated, a small pop-up balloon with the text inside (label) will be shown next to the mouse pointer, as you can see in many different web pages when we approach the pointer to a link or to an image, etc.. although we can customize it as we prefer (see section "5 - PROPERTIES" at the end of this document).

5. – If we check this box and then we use the buttons on the left we can make visible a piece that is hidden or if that piece is initially hidden we can show it (later we will explain how to hide a piece from the beginning). Take into account that these actions will be permanent; We could also make possible that when the pointer is moved away from it, the piece will be hidden/shown again respectively. In order to do that, you just need to select the button with the two green arrows.

6-7: After configuring all the parameters to our needs, we will have to confirm the creation of the new action by clicking on the button (6). In order to discard the changes or the creation of the new action, you can use this button (7). Until we have used one of these two buttons, the green button to create a new action will be greyed and cannot be used.

"Click" tab

The user, besides placing the mouse pointer over any of the pieces of the image, will have to click on it so that the action is executed.   The options we have are:
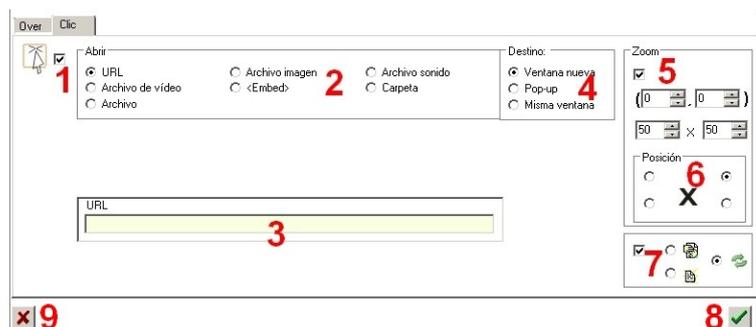
1.- This box activates the rest of the options so that we can activate one or several (they are not exclusive).

2.- Once the box number 1 is activated, in the "*Open*" section all the options are available; these options are already well known if we have worked previously with other Ardora multimedia resources: you can open a web page or the content of a URL, show a video, open a file in any format (for those files not recognizable by the browser, you will need to get the corresponding program installed), insert an embedded code, play an audio file and finally attach a folder with files to run any type of program compatible with the browser or operating system, such as an activity, a multimedia page or a package of activities created with Ardora, for example.

3.- This area will display, depending on the type of resource we have chosen in the "Open" section, the corresponding element in order to be able to insert the associated resource. For example, if we choose to insert a sound file you will see this field:

If we want to include a "folder" this will be the aspect:
Etc.

4.- In the "Destination" section we will indicate if we want the resource to open in a new window or browser tab, in a pop-up window or in the same window thus replacing the graphic and everything that may be in the page that we are currently working with respectively.

5.- If we activate the "Zoom" section box, in addition to executing the resource, the graphic will change and the coordinates specified in the corresponding fields will be zoomed in, as we have already explained in this document in the section "3 -Visible area" of the tab "1- SVG / Action".

6.- On the top of the visible part of the graphic, a button with an "X" will appear in the position previously selected in the central box. Therefore, when you click on it, the associated multimedia resource will be closed.

7.- Finally, if we check the box at the bottom, we can indicate that when we click to launch the resource, the visible part of the SVG graphic is hidden (only the button with the "X" will appear to be able to close the resource), the graphic will be shown without any zoom when we close the resource with the "X" button or, if we use the button with the green arrows, we can change the zoom area to the full graphic and then hide it by successively pressing the button "X".

8-9.- As in the "Click" tab, after configuring all the parameters according to our needs, we will confirm the creation of the new action with the button (8). To delete the changes or the creating of a new action, it is necessary to use button (9). Until we have used one of these two buttons, the green button to create a new action will be grayed and cannot be used.

TAB 2 – TEXT IN GRAPHIC

In SVG graphics, for each of the texts we have included, there is a specific label called "Title", which we can edit with a program such as "Inkscape" to assign an associated text that could later be easily identified while using Ardora:

Once the graphic has been imported into Ardora, we can go to tab 2, "*Text in graphic,*" and we will find all the names previously associated with each of the texts included in the SVG graphic in the appropriate "Title" fields (1):

In this field (2), you can type the alternative text you want to be displayed in a pop-up label generated by the browser itself whenever the users place their mouse pointer over the original text of the SVG graphic and confirm the changes using this button (3). At that time, the alternative text will appear in the "Replace" column of the box next to the original text (4).
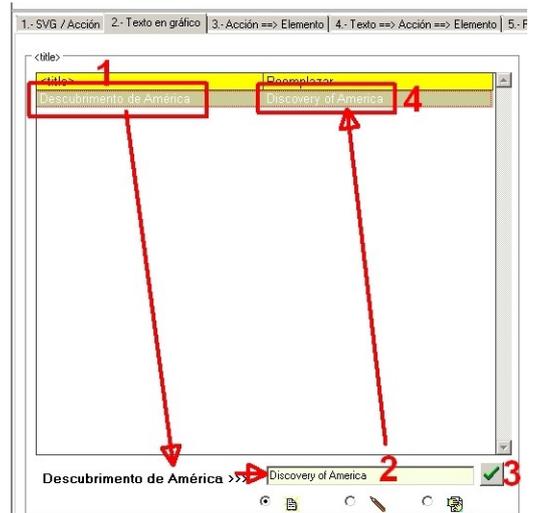
Provided that we have selected the button on the left ("show"), whenever the users move their mouse pointer over one of the texts included in the graphic, the browser will generate a pop-up label with the text specified in this field (2):

If we select the button on the right ("hide") and save the changes, even if users move their mouse pointer over the text, the browser will not generate any label.

By using the button with the pencil, we will define that only the labels we have modified can be shown.

TAB 3 - ACTION ==> ELEMENT

We will use this tab to associate the actions that we have previously defined in tab 1 to the pieces that make up the SVG graphic we are interested in, thus configuring the interactivity with it. The following elements will appear on the screen:

1.- In order to assign an action to any of the pieces on the chart, we must first identify that particular piece. In the table on the left (3) there is a list of all the pieces making up the graph and, if we already know the "ID" of that piece we want to work with (see the first pagess of this document) we can write it in this field (1) and click on the button on the left to select it: it will automatically appear at the top of the table and will also be identified on the right side ready to assign any specific action to that element.

In this same field (1), if we write the first letters of the "ID" of the piece we are interested in and click on the button on the left, Ardora will search all the IDs starting with these characters and will show them in the table for a better location.

2.- This list shows the different types of pieces that can be selected and that will be shown in the table on the left depending on the type of piece we need to find to further adjust the search by object types. In an SVG chart we can also find:

rect > rectangles

circle > circles

ellipse > ellipses

line > lines

text > texts

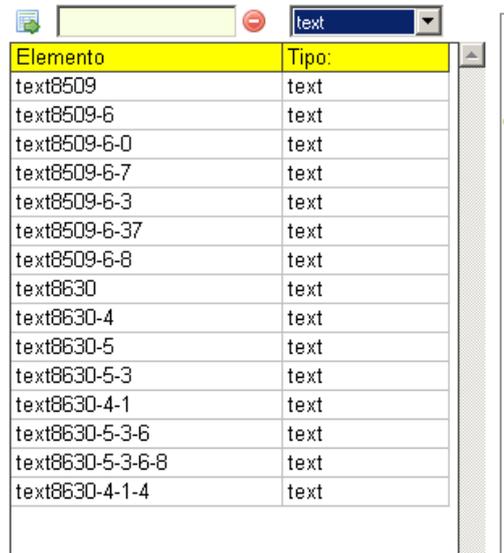polygon > polygons

polyline > open polygonal lines

path > routes, continuous curves

image > images

g > object groups

Therefore, if we want to associate an action to a text, for example, we should select the option "text" in the list and the table on the left will show the items identified as texts within the graph:

Select in the table the text you are interested in and it will appear highlighted in the upper left part of the box on the right, ready to associate one or more actions:
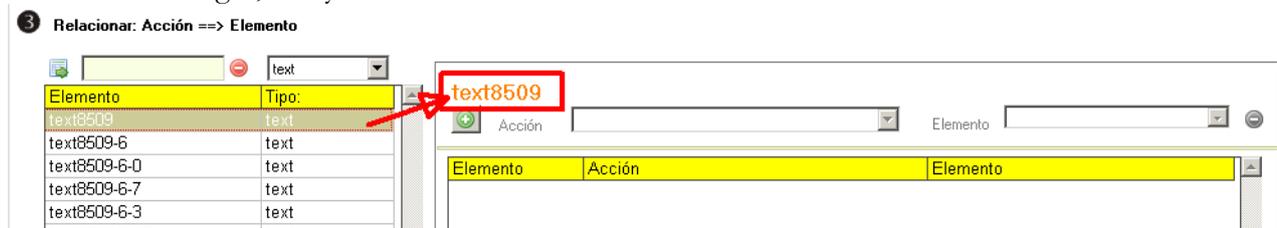
3.- This table will show all the elements that make up the SVG graph. Just select one of them and it will appear in the upper left part of the box and you will be able to associate actions, as shown in the image above.

4,5.- Once you have selected the element of the SVG graphic to which you want to assign some action, press this button (4) to activate the drop-down list (5) and to be able to choose the action you want to assign:
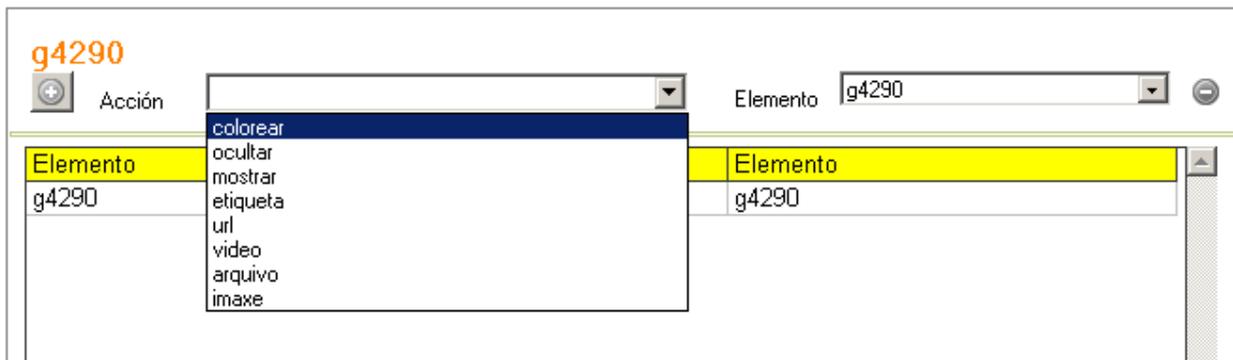
6.- The element previously selected will appear automatically in this drop-down list; although if we want to associate the action to another part of the graph, we can display this list and select it. If you want to remove any of the actions associated with that piece, you just need to select it in the table and use the red button on the right side of this list.

7-8.- Once the action has been selected in the drop-down list (5) and assigned to one of the pieces of our SVG with the button (8), it will be shown in the table (7) on the right. We can repeat the process by assigning more actions to the same piece as many times as we feel necessary.   At the end, all the actions associated with that piece will be shown in the table:
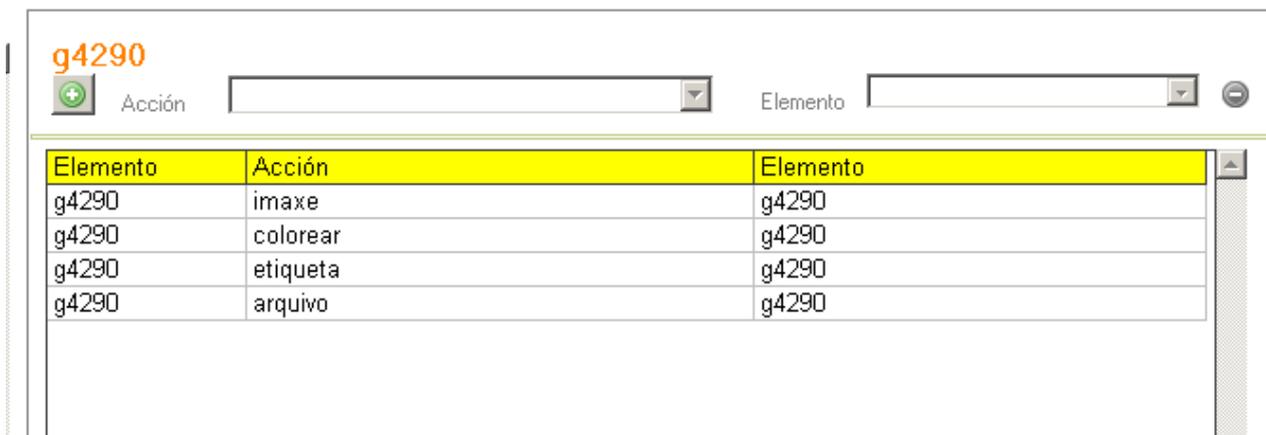
In the first column "Element" we can see the ID of the piece of the SVG graphic which we have assigned an action to; in the column "Action" we will see the name of the action associated with that particular element and in the right column "Element" the name of the piece to which we have assigned the action.

9.- As usual, this would be the button to delete the changes introduced in the actions associated to one of the pieces of the graph or to discard new actions associated to a piece.

10.- In the "Initial Position" box we can check the box and use the green button to hide the piece selected in the table on the left from the very beginning. Thus, when the user opens the website with the graph, that piece will be hidden and we can make it be shown later by assigning some of the actions that we have already explained in the tab "1-svg/action".

TAB 4 - TEXT ==> ACTION ==> ELEMENT

This tab will allow us to write a text that will then be incorporated into the web page containing the SVG graphic. We can make it possible that when we move the mouse pointer over certain words, sentences or paragraphs any of the actions that we have specified in the tab "1-SVG / Action" in the piece of the corresponding part of the graphic will be executed.

These are the elements that we are going to find in this tab:

1.- Check this box to activate the rest of the options.

2.- These controls allow us to format the whole text in the box below or any part of it. From left to right: colour, size, bold, italic and underlined.

3.- Main box where we will write or paste the text. Just below it we can find some controls to assign properties to all the text in general. From left to right: font type, colour and font size, spacing and alignment (left, right, centered and justified).
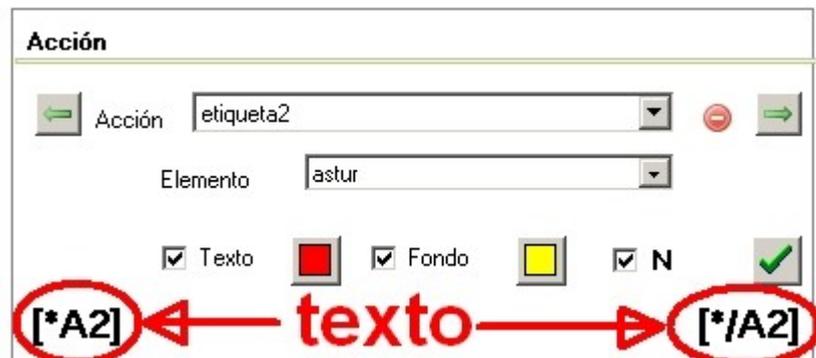
4.- In this drop-down list we can select one of the actions previously created in the "1-SVG / Action" tab to assign it to a specific part of the text.

5.- We will use this drop-down list to select the "ID" associated with the part of the graphic you want to associate an action to.

6.- These controls allow us to assign properties to the text that will make the action be executed each time we move our mouse over it. From left to right: change the colour, background, bold and, at the end, click on the green button to definitively associate these characteristics with the corresponding action and graphic piece.

7.- We only need to indicate the word, sentence or paragraph that will act as a link to execute this action in the graph. In order to do that, have a look at the codes on the right and left and enter these codes at the beginning and end of the text that we want to act as "trigger" of the action, within the main text box (3).

If we wish to assign more actions to other parts of the text, we need to click on the green arrow on the right side of this drop-down list (4) to delete the content of the fields and enter a new action, a new "ID" from another part of the graphic; we can change the text properties if necessary and then we should click on the green button to accept. Keep in mind that in the lower part, to the left and to the right, new codes will be shown, which will be the ones we need to introduce at the beginning and at the end of the new text to which we want to assign the new action:

8.- Finally, in the "Position" box we will specify if we want the text to be positioned in the upper left, right or lower part of the graph.

As an example: as the elements of the main tab of this section of the manual are set up, and considering that the action of field (4) "label 3" is conceived to change in that piece of the graphic the thickness and colour of the line, the background color and also add an informative label, once the user moves the mouse pointer over the appropriate word of the text (which in this particular case would be "Cantabria"), the following changes would take place in text and graphic:

La asamblea legislativa

La asamblea es el parlamento autonómico unicameral, que en las distintas comunidades se denomina de diferentes formas:

Parlamento: Andalucía, Canarias, Cantabria, Cataluña, Galicia, Islas Baleares, La Rioja, Navarra y País Vasco.
Cortes: Aragón, Castilla-La Mancha, Castilla y León, y Comunidad Valenciana.
Asamblea: Extremadura, Comunidad de Madrid y Región de Murcia.
Junta General: Asturias.

TAB 5 -

There are two main boxes in this tab: "Drop-down menu" on the left and "Label" on the right.

Drop-down menu

It consists of a button: ▤ (optional) that the user can press to display more options:

1.- We should check this box if we want the menu to appear; otherwise, the button will not be shown. By default it is activated when we create this multimedia resource.

2.- In this field we will type the text that will be shown in a pop-up label automatically generated by the browser when the user moves the mouse cursor over the menu button (1).

3-4-5.- By ticking the box (3), a button will be displayed after you click on the menu button ⓘ that the user will be able to press to obtain information

about what we write in the "License" field (5). By placing the mouse cursor over that button, the browser will generate a pop-up label with the text we had previously typed in this field (4).
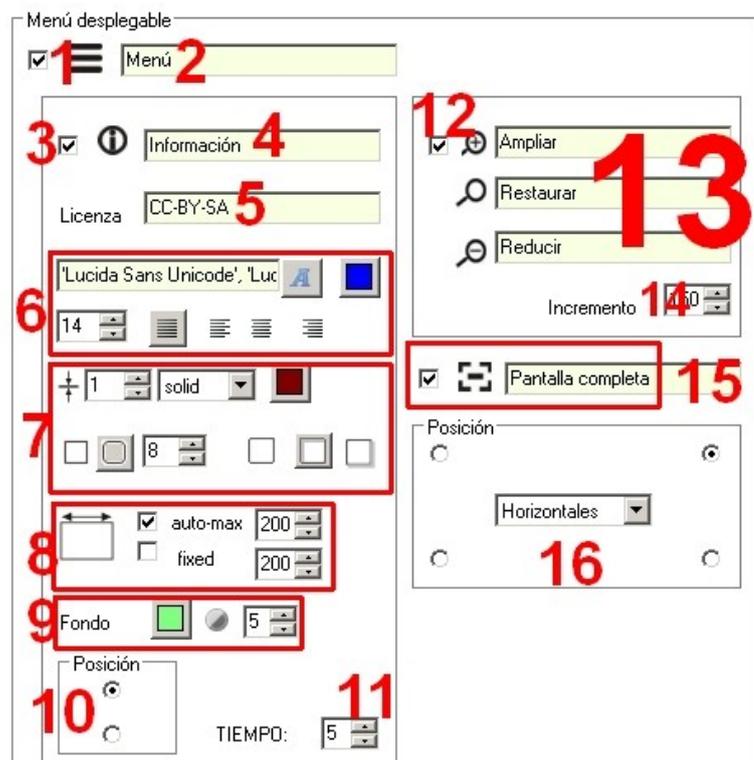
6.- Here we can edit the text properties and the pop-up label that will be displayed whenever the user clicks on the information button: font, font colour, size and alignment.

7.- With these controls we will establish the thickness of the border of this pop-up label, the type of line of the border of the label, its colour, if it will be a rectangle with pointed or rounded corners, the radius of these corners and if the label will be without shadow, with inner shadow (upper and left) or with outer shadow (right and lower) respectively.

8.- This section is responsible for controlling the width of the pop-up information label. If we tick the "auto-max" box and establish a width in pixels to the right, Ardora will generate a label with that maximum width and the required height to fit all the text typed in this field (5), always adapting the width of the label to the length of the text; in other words, if the length of the text is shorter than the specified width, the label will be adjusted reducing its width. If we tick the "fixed" box, Ardora will do the same as in the previous option, with the exception that the width of the label will always be fixed, regardless of the length of the text written in the field (5) and will not be adapted to the length of a text shorter than that width.

9.- Here we can determine the background colour of the label and its transparency if the text is large, occupies a considerable area of the screen and we wish to see all or part of what is underneath. If we set it to 10, it would make the label totally opaque and if we set it to 0, it would make only the text and the border of the box visible.

10.- We determine here if we want the pop-up label to appear at the top of the page or at the bottom.

11.- When the user clicks on this button , the label will be displayed at the top of the screen for as many seconds as we indicate in this field, and then it will disappear.

12-13-14.- By checking the box (12) these three buttons will be added to the menu to enlarge, reduce or restore the graphic to its original size. In these fields (13) you can type the texts that will be included in the pop-up labels generated automatically by the browser each time the user places the mouse cursor over the buttons. In this field (14) we will indicate the number of pixels that will enlarge or reduce the graphic when the appropriate buttons are used (always maintaining their proportions).

15.- If you check this box, the button will be displayed so that the page can be expanded to full screen. In this field we can type a text that will be shown in the pop-up label generated by the browser.

16.- Here we will specify which of the four corners of the page we want the menu button to be displayed and also how to display the rest of the buttons by clicking on them: from left to right (horizontal) or from top to bottom (vertical).

Label

In this final area we find the controls to configure the labels that Ardora generates; we are not talking about the usual rectangular labels generated by the browser but the ones we create when filling in the "Label" field in the "1-SVG / Action" tab, inside the "Over" section. We can find the following elements:
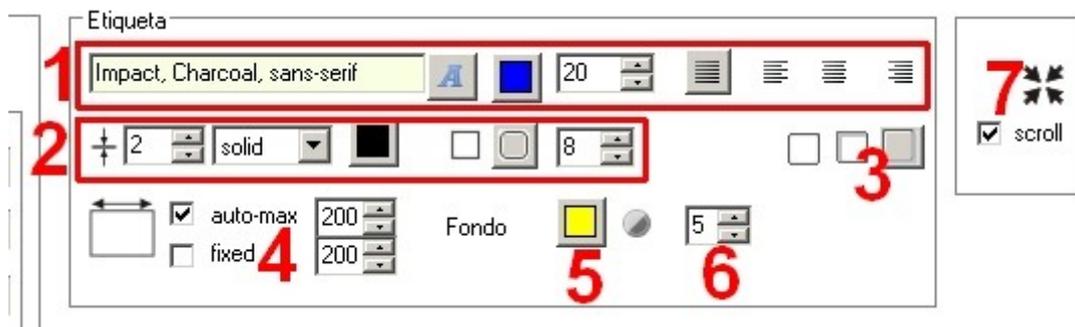
1.- We can choose here, from left to right: the font, its colour, its size and its alignment with respect to the edges of the box (justified, left, centred and right).

2.- By using these controls we will be able to define the characteristics of the line forming the box; from left to right: thickness, type of line, colour, straight or rounded corners and radius of the curve of the rounded corners in the last-mentioned case.

3.- The first of these three buttons would leave the box without any shadow, the second with an inner shadow and the third with an outer shadow.

4.- Just like it happens with the information button, it controls the width of this pop-up label. If we check the box "auto-max" and set a width in pixels to the right, Ardora will generate a label with that maximum width and the necessary height to fit all the text typed in the appropriate field of the tab "Over", always adjusting the width of the label to the length of the text; in other words, if the length of the text is shorter than the specified width, the label will be adjusted by reducing its width. When you check the "fixed" box, Ardora will do the same as with the previous option, except that the width of the label will always be fixed, whatever the length of the texts and will not adjust to the length of a text shorter than that width.

5.- By clicking on this button you can choose the background colour of the label.

6.- It controls the background colour transparency that we had previously applied. A 10 would make the label completely opaque and a 0 totally transparent and therefore only the text and the edge of the box would be seen.

7.- By checking this option, the graphic will be shown centered on the page

TAB 6 - WEB PAGE

This tab is common to all Ardora multimedia pages; in this tab the different general parameters of the web page are specified, such as the statement, the background, the title of the tab, etc.

These common features can be found on the Ardora website ☾ help page, document: Points, Time, Messages and Statement.