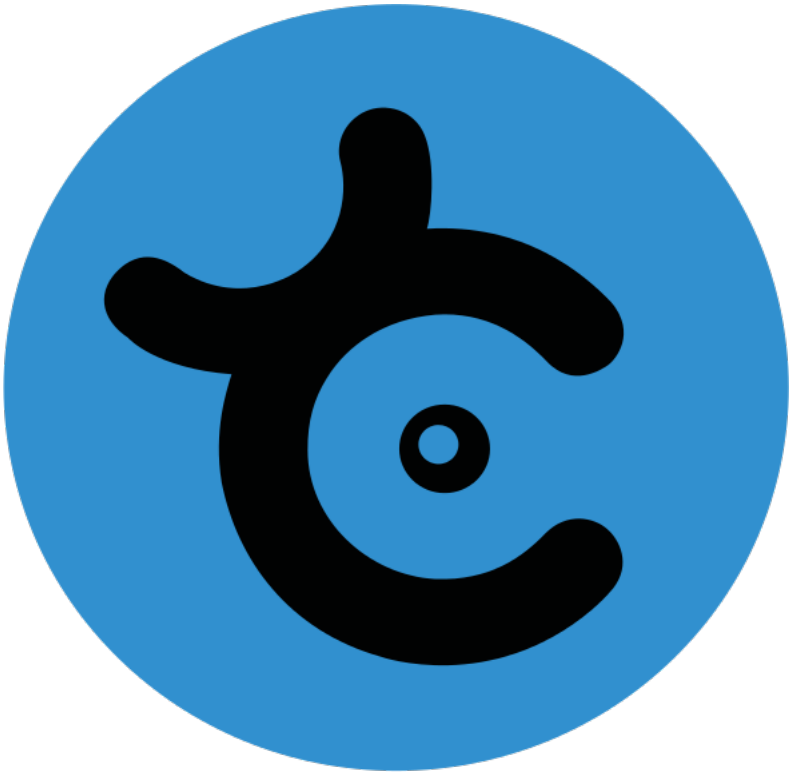
Xia

Create HTML5 interactive images



April 9, 2015

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I Introducing Xia

a What is Xia ?

Xia is a free software developped by teachers from the french academy of Versailles. It is released under GPLv3 license. Xia converter takes a svg file as input and outputs an interactive image in html5. Xia allows to generate animations and interactive activities : drag and drop games, discrimination, selection, etc.

First sections of this documentation (see section II) are dedicated to make a very simple interactive image: cropped details with comments only made of plain text. Then, you will learn how to create an enriched interactive image (see section III). Final sections (section IV) will teach you to create games.

All examples are on line (links and downloads available at the beginning of each section). At the end of each section, a heading "Abstract" presents the essential guide lines to remember when creating an interactive image.

b General process

Xia is only needed at the end of the process. As we can see on figure 1, most of the work is done with a vector graphics editor. We recommend using the free open-source and muliplatform software Inkscape, which is really easy to use (Inkscape will be used in this document) [1].

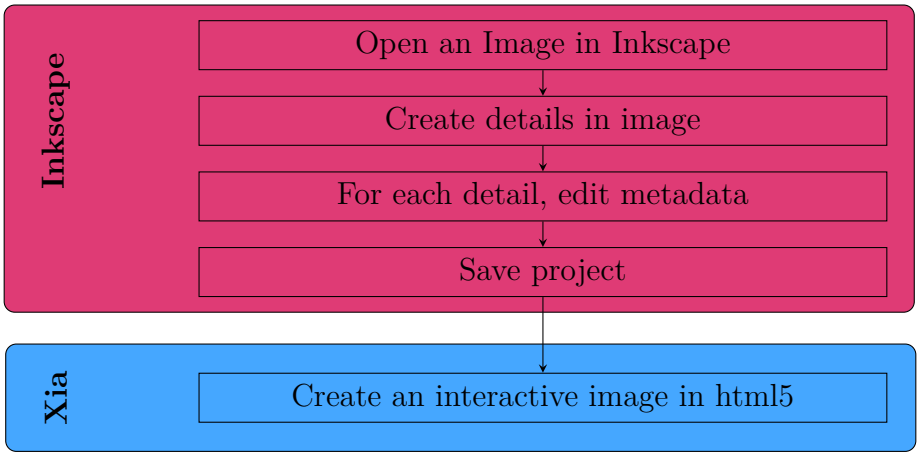


Figure 1 – Creation process of an interactive image with Xia

If you have "image active" project files (with a .xia extension), you can change their extension to .zip, unzip them, get the svg file located in the unzipped folder, and open it with Inkscape. If you are using GNU/Linux, just explore the .xia file and extract the svg file.

c Installing Inkscape and Xia

Having Inkscape and Xia installed on your computer is the only thing you need to read this documentation. You will find any relevant information about the installation of Inkscape on its website [2]

1. It is also possible to use LibreOffice Draw.
2. http://www.inkscape.org/.

Make sure to install Xia after Inkscape. Otherwise you will not be able to access Xia directly in Inkscape.
If you work on a Windows system, use the portable version to access Xia outside of Inkscape.

GNU/Linux In a terminal:

```
$ sudo echo "deb http://repository.crdp.ac-versailles.fr/debian
xia main" | sudo tee /etc/apt/sources.list.d/xia.list
$ wget -q http://repository.crdp.ac-versailles.fr/crdp.gpg -O -
| sudo apt-key add -
$ sudo apt-get update && sudo apt-get install xia
```

Mac OS X Download and install the package:
http://xia.dane.ac-versailles.fr/download/xia.pkg

Windows Download and install the Inkscape extension (http://xia.dane.ac-versailles.fr/download/setup.exe) or the portable version (http://xia.dane.ac-versailles.fr/download/xia-windows.zip).

II Creating your first interactive image using Inkscape and Xia: *Basic features*

a Building the svg source file to generate an interactive image

Explore the interactive image created for this section of the documentation.

Download the svg source file.

Manipulations described in this section will help you to create a "basic" interactive image featuring:

— Zoom-in enabled details
— Comments on details only made of plain text

Once you have chosen the image you will work with, open it with Inkscape:
`File` → `Open`

When asked by the software if you wish to "`Link`" or "`Incorporate image`", choose "`Incorporate`".

The information filled in the `document Metadata` (`File` menu) will be included in the interactive image once generated : title, creator, rights, ... It is highly recommended to type in this information. You can see what it looks like once generated on the image below[3]:

3. The fields "author" and "rights" appear in the window "About", symbolized by a clickable button shaped like the letter "i"

The title entered in the metadata of the document appears above the interactive image and gives its name to the web page. The creator and rights appear in the pop up associated with the "i" button on the right of the title of the interactive image.

You can save the image in svg format in the earlywork, through `File` → `Save as...`.

For more clarity, you should remove the current extension of the image in the field `Name` of the dialog window. Finally, in the dropdown menu, choose the Inkscape svg file format:

`SVG Inkscape (*.svg)`.

Several Inkscape tools can be used to clip the details that will become active in the animation generated by Xia. Among these:

— `Create rectangles and squares`
— `Create circles, ellipses and arcs`
— `Draw freehand lines`
— `Bezier curves and straight lines`

Without going in the detail of how these tools work [4] note that the tool "`Draw Bezier curves and straight lines`" allows to crop "click by click" (work points are called "nodes"). You close the figure by clicking on the start node. You can draw "`Bezier curves`" by keeping the mouse button pressed after creating a node, then moving the cursor to bring up the control handles to shape the curve segment as desired.

If you set a left open shape in Inkscape (for example a line), Xia will automatically close it by connecting a straight line between the beginning and the end of it.

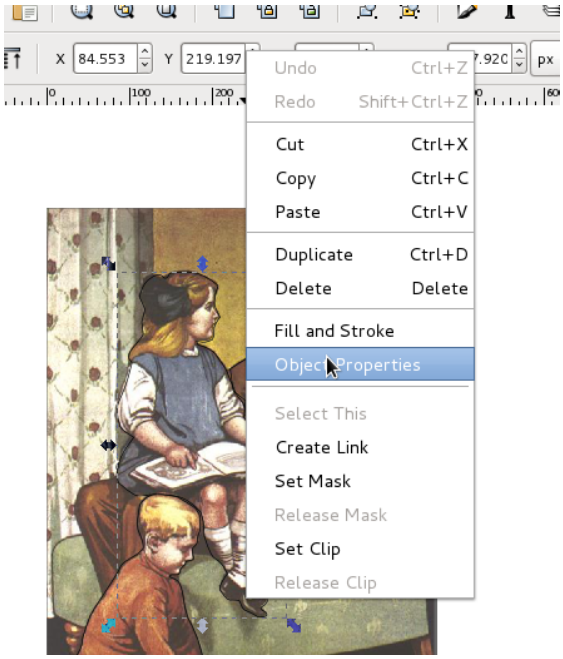
The order of creation of details in Inkscape will be the same in the html5 interactive image (for example: the first created detail in Inkscape will appear at the top of the interactive image). If you wish to change the sequence without having to create the details once more, see section g.

Once you have cut out a detail [5], you can select it with the tool `Select and transform object` to resize it, move it...

4. For this, refer to Inkscape manual or Floss manual.
5. The colour of the border will be the same in Inkscape and in the animation generated by Xia.

If you have some difficulties to select the details you have drawn, apply a colour background to them. Choose whatever colour you like, except for black and white (see why in section f).

You can access to the `Object properties` by right-clicking on the cut-out detail. Thus you also access to the dialog window in which you add the text to be associated with the detail in the interactive image:



The two fields to be filled in this window are `Title` and `Description`. The title filled in here will be that of the detail, description will be its comment. Do not forget to click on the `Define` button before you close the `Object Properties` dialog window.

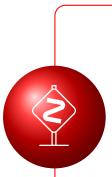
The process described above must also be done with the background image : the title and description indicated here will serve as an introduction to the interactive image (title and comment not related to a particular detail).

b Generating the interactive image with Xia

When all the details are clipped and their metadata indicated, Xia can be launched (see figure 2). You must select the svg source file with the top left icon[6], choose the export options (see figure 3), and then choose a template and the destination folder of the interactive image.

Clicking on one of the template icons generates a series of files and folders. Open the `index.html` file in a webbrowser to see the html5 interactive image.

6. When launched as an Inkscape extension, the top left icon has a different look, and can not be selected, since Xia assumes you want to create the html5 animation from the image you are working on in Inkscape.



This file will not display anything if used alone. All the other files and directories generated during the export process must be stored in the same folder (see figure 4) as the `index.html` file so that the animation works properly. **It is therefore essential to dedicate a specific directory for each exported image.**

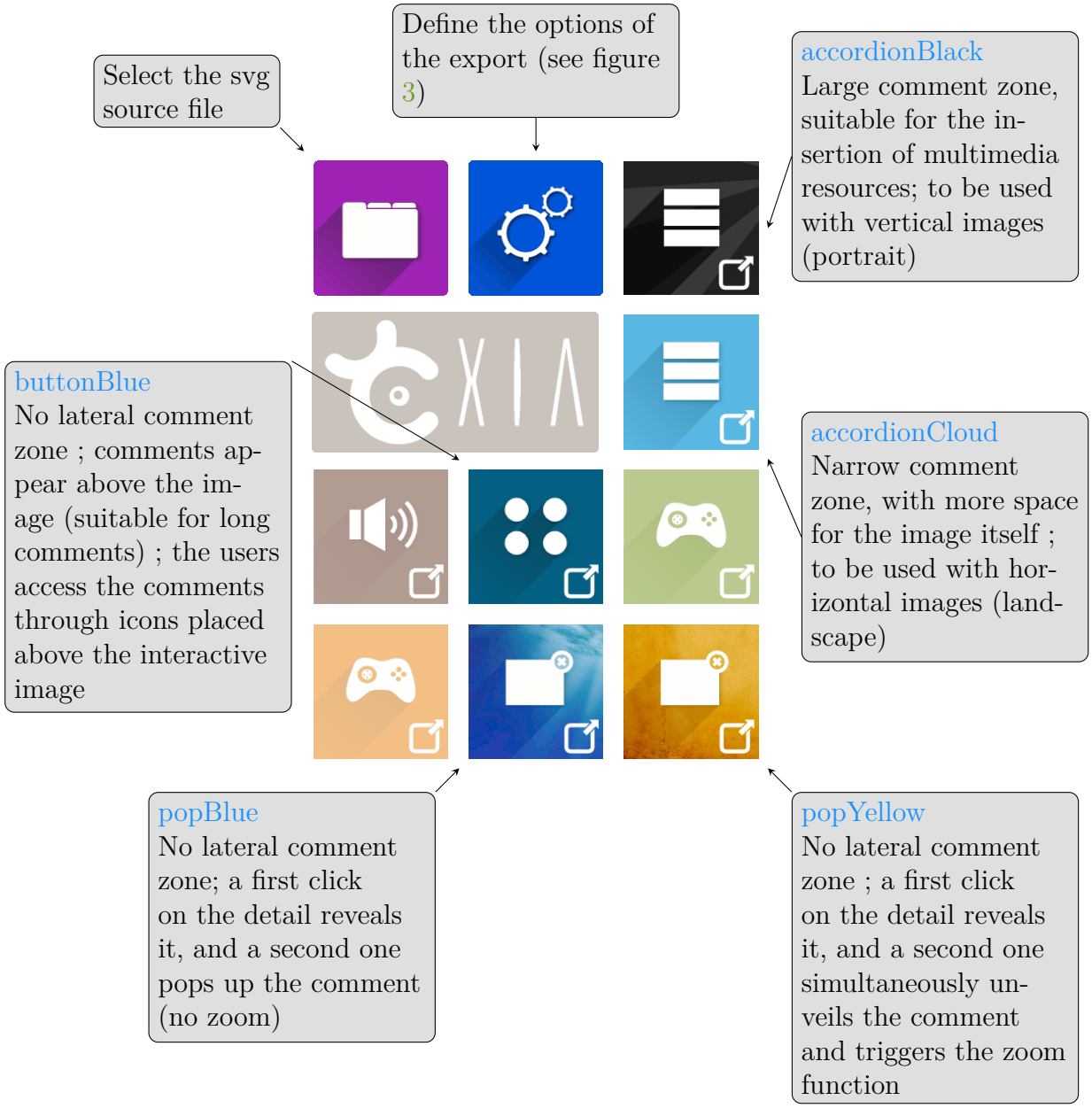


Figure 2 – Xia's templates

In fact, since Xia is also an Inkscape plugin, you can generate your project directly in Inkscape: just click on `Plugins` → `Various` → `Xia Édu`, and choose your template and destination folder.

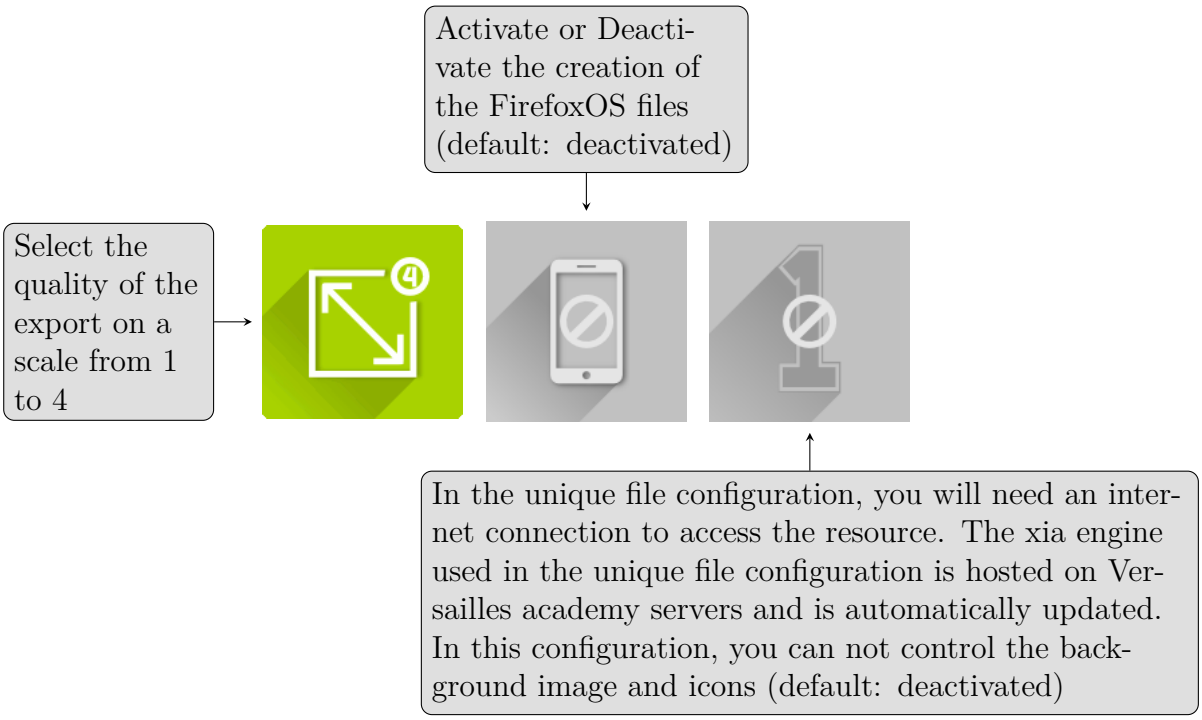


Figure 3 – Xia's exportation options

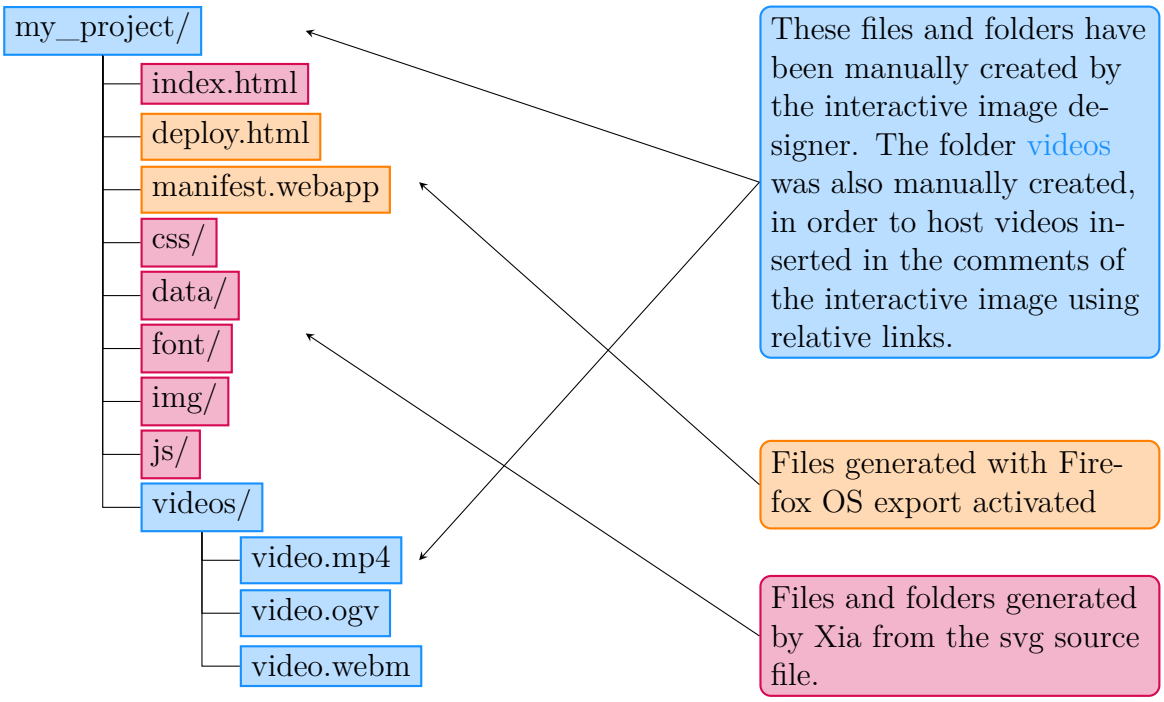


Figure 4 – Files of an interactive image with FirefoxOS export activated

If you use GNU/Linux or Mac OS X, you can generate your html5 animation using the terminal with the command `xia-converter`. The parameters are `-i` to indicate the input file, `-o` to indicate the exportation folder, and `-t` to indicate the template.

GNU/Linux

```
$ xia-converter -i myfile.svg -o export_folder/ -t
accordionBlack
```

Mac OS X

```
$ cd /Applications/xia.app/Contents/Resources/
$ python xia.py -i myfile.svg -o export_folder/ -t
gameDragAndDrop
```

The template accordionBlack will be chosen if a syntax error is made in the `-t` parameter.

c Firefox OS export: how does it work?

If you do not intend to create FirefoxOS applications, skip this section.

Once you have generated the interactive image with the Firefox OS option (see figure 3), you have to modify the content of `deploy.html` and `manifest.webapp`.

1. In the **`deploy.html`** file, modify this line:

   ```
   var manifestUrl = 'http://my-webserver.com/manifest.webapp';
   ```

   And indicate the future url of the `manifest.webapp` file.

2. In the **`manifest.webapp`** file, modify these lines:

   ```
   "name": "XIA",
   "size" : define_package.zip_size_here,
   "release_notes" : "generated with XIA",
   "launch_path": "/index.html",
   "package_path" : "http://my-webserver.com/package.zip",
   "developer": {
       "name": "Académie de Versailles"
   ```

   The "name", "size", and "package_path" lines are mandatory [7].

Once you have made these modifications, zip all the exportation files and upload the archive, the `deploy.html` and the `manifest.webapp` files to a web server.

When the user opens the `deploy.html` file in the Firefox OS browser, their phone will download the interactive image and transform into a html5 application.

Applications made with the FirefoxOS export can also be installed on GNU/Linux, Mac OS X and Windows operating systems.

7. The tricky part is the "size" line, where you must indicate the size of the package even before you have zipped it.

d Abstract

1. An interactive image is first built in Inkscape (svg format). Xia only converts the svg source file into an html5 animation ;
2. The title of the interactive image must be indicated in the `Metadata of the document` ;
3. The text of the details must be filled in the `Object properties`, in the `Title` and `Description` fields of the cut out details ;
4. The general description of the interactive image must be indicated in the `Object properties` of the background image.

III Enriched interactive image

Explore the interactive image created for this section of the documentation.

Download the svg source file.

In this section, the goal is still to create a "traditional" interactive image (ie. in which a detail matches with a comment), but the content of the comments will be enriched with formatted text or multimedia resources.

a Formatting text

In order to insert formatted text, the tags described in figure 5 should be used.

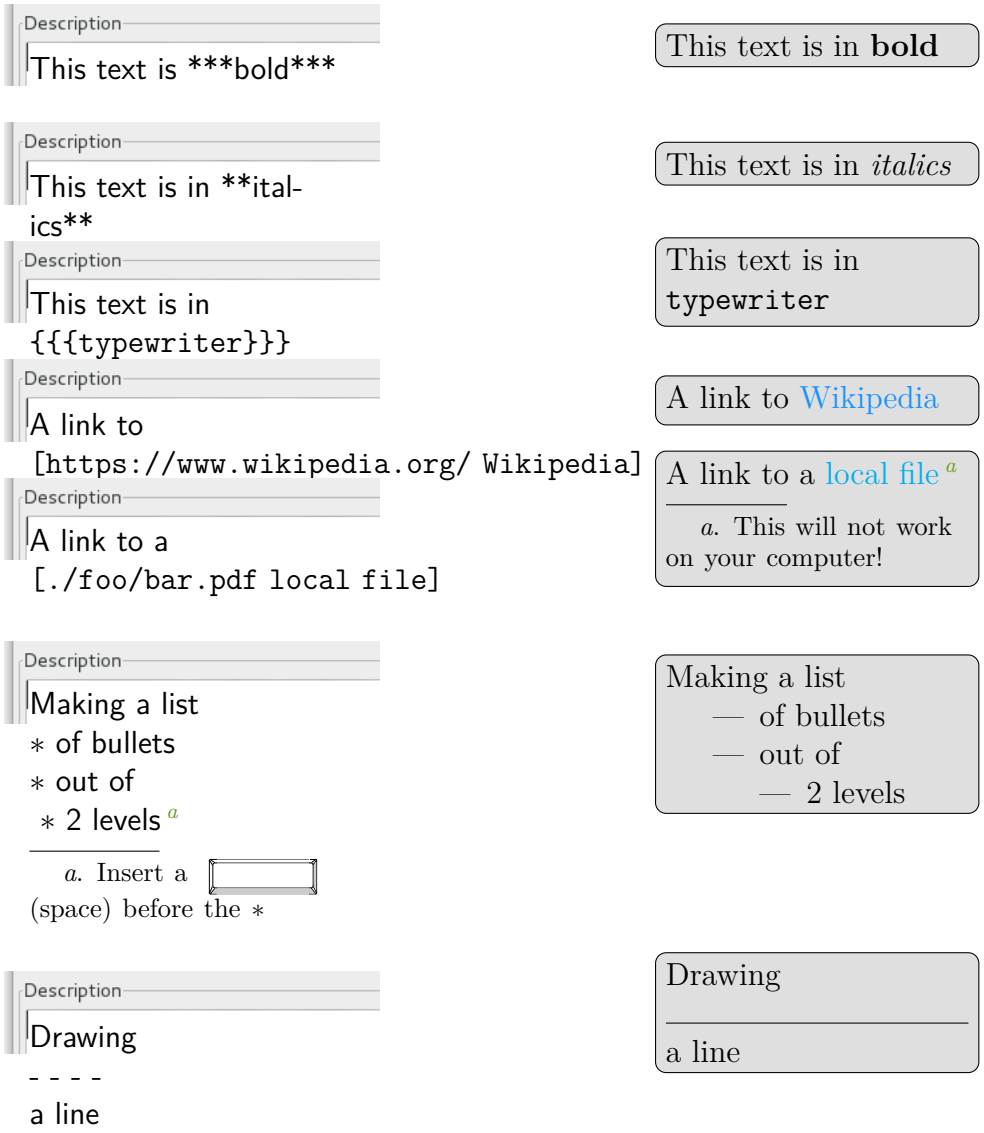
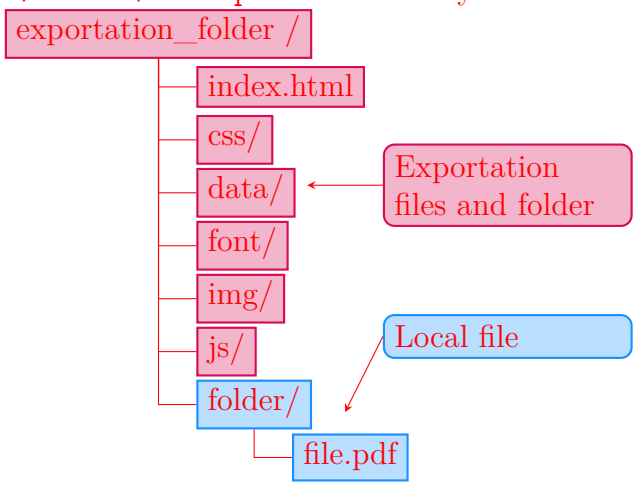


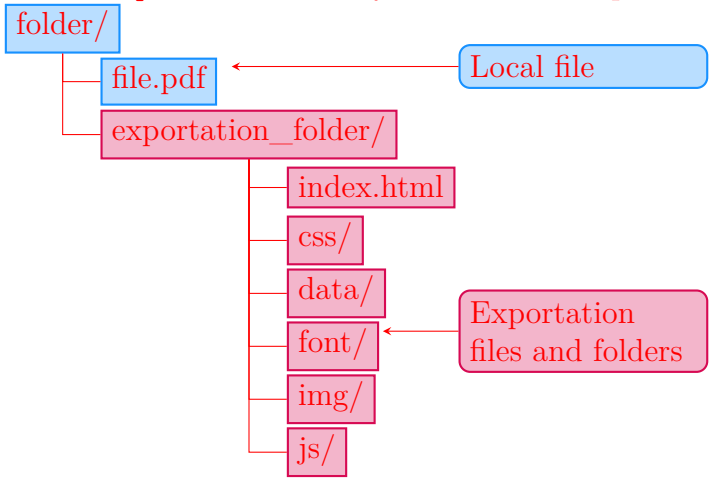
Figure 5 – Tags to format text

Links to local files must be relative links. Use `./` if the file is contained in the exportation folder, and `../` if the file is somewhere in a parent folder. Two examples:

— `./folder/file.pdf` means that your file is dropped here:



— `../file.pdf` means that your file is in a parent folder:



b Inserting multimedia resources into details

Inserting multimedia resources into details comments is quite easy: just paste the resource url (relative or absolute link) or iframe tag of the web service you want to use. Xia will automatically create a multimedia player in the comment as long as the resource (image, sound or video) matches its supported formats:

Images jpg, jpeg, png, gif

Audio ogg, mp3

Video ogv, webm, mp4

The link has to be inserted into the `Description` field of the `Object Properties`.

Absolute link If the resource url is

`http://web.crdp.ac-versailles.fr/02546.ogg`

just type it in the `Description` field of the `Object Properties` in Inkscape

Relative link If the multimedia file is located in the interactive image folder or in a folder (see figure 4 and section a) within this one, just indicate

its location, keeping in mind that the interactive image folder has to be considered as the root folder. For example, if the `video.ogv` file is located in a `videos` folder located itself in the interactive image exportation folder, just indicate:

`./videos/video.ogv`

in order to create the player.

Since video formats supported by Xia are not natively supported by every web browsers, it is recommanded to export videos into the 3 supported formats, and to upload them into a single folder (from there, the only difference between these files is their extension, ie. .ogv or .mp4 or .webm). Even if a particular format is indicated in the description (following the previous example : `./videos/video.ogv`), if the browser is unable to read the resource, it will automatically attempt to read the files of the same name possessing a different extension (ie. `video.mp4` then `video.webm`).

The last option is to insert an iframe tag. It will be interpreted and the reader will appear in the comment, giving access to the resource.

c The "audioBrown" template: sounds instead of text

Explore the interactive image created for this section of the documentation.

Download the svg source file (zip file containing the svg source file and the sounds).

The "audioBrown" template is specifically dedicated to the creation of interactive images in which details are associated with sounds instead of text.

The method to insert sounds using absolute or relative links is described in section b. If you wish the sound to play automatically as the user clicks on the comment, just add `autostart` right after the url [8]:

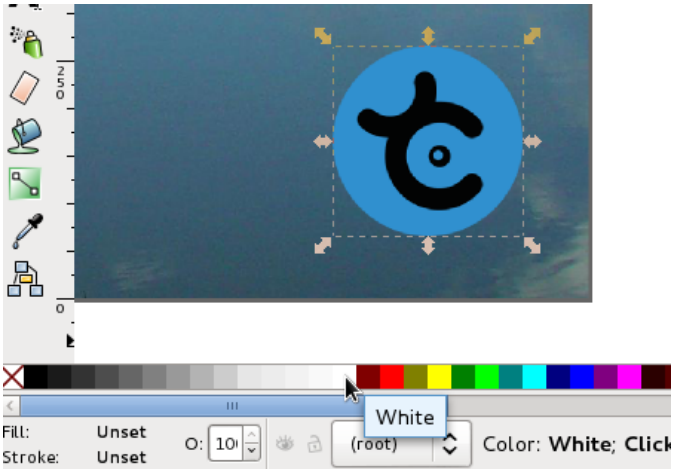
```
./sounds/detail_1_sound.ogg autostart
```

d Inserting images into your interactive image

Png images can be added to the background. To do so, select `File` → `Import` in Inkscape to incorporate your new image.

The imported image will only appear in the html5 animation if you have applied white background in Inkscape. Choose white in the horizontal colour palette at the bottom of Inkscape interface:

8. The "`autostart`" tag also works with the other Xia templates.



By indicating a url in the `Title` of `Object properties` field, the embedded image becomes a clickable icon linking to a web page.

e Displaying a question and unveiling an answer

You can create clickable icon which will momentarily prevent the user to read the end of the comment. You can even ask the user to enter a password to read the end of the comment.

To do so, just indicate, in the description, the tags described in figure 6.

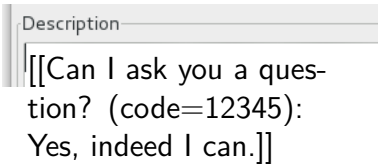


Figure 6 – Tags to insert a button which will momentarily prevent the user to read the end of the comment

Use the double brackets tag `[[ (...) ]]` to indicate you wish to create the icon, split the text between the question and the answer with the `:` tag, and add a code by inserting `(code=insert_password)` just before the `:` tag [9].

f Controlling details behavior : automatic display and disabled zoom

Default behavior of details in an interactive image consists in:

— highlighting details only on mouse over or with a click on the comment detail title

— zoom in effect when clicking again on the active detail [10]

Both of these default behaviors can be modified if you apply a white or black background to cropped details (see section d):

9. The `(code=...)` is not mandatory. Remember that you can not insert the `)` character in the password.

10. Except for the popBlue template.

Detail with a white background In the generated image, details will be immediately visible as a flat area of opaque color, hiding the background image; once selected, it reveals the background (the zoom effect is still active).

Detail with a black background Users still have to click on the detail to unveil it, but the zoom effect is disabled.

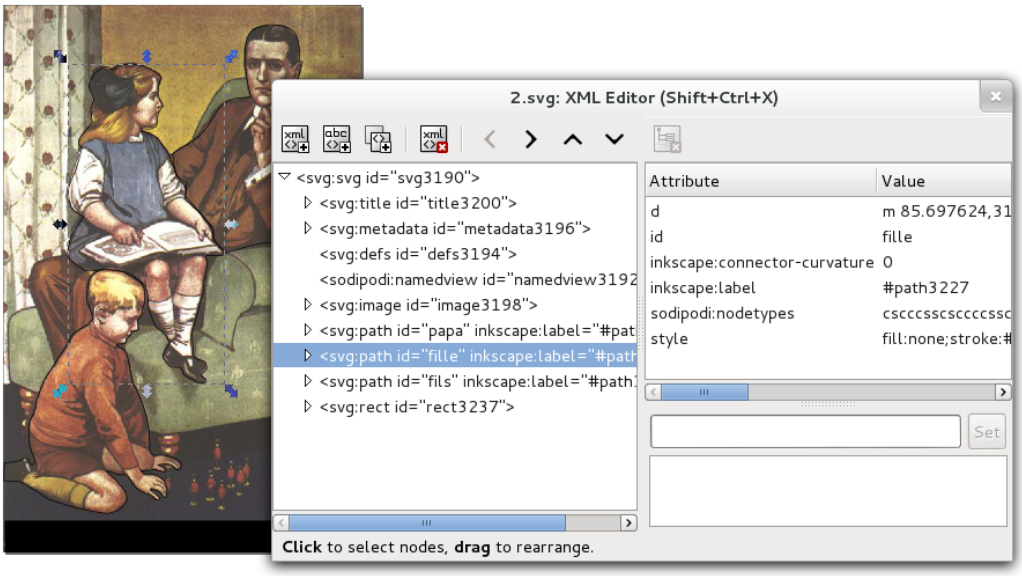
Logical consequence : you can not apply a white and a black background all together on the same detail. A single detail can not be immediately displayed and have the zoom effect disabled.

g Controlling order of details display in the lateral comment zone

By default, in the interactive image, the details appear vertically following the order in which these details have been created (the first detail created in Inkscape corresponding to the detail placed up in the sidebar of the interactive image).

We will work with the `Edit → XML Editor` to change this default order.

A priori complex to manage, this dialogue window is in fact quite easy to use : by selecting the input in the XML editor, the corresponding detail will be highlighted on the image and the only thing left to do is to drag the files to the desired location:



The Inkscape XML editor allows to control the display order of the details in the interactive image. Note the highlighting of an element in the editor and on the background image by a single mouse click.

h Abstract

1. You can enrich and shaping text using tags
2. A multimedia enrichment is possible through a simple link (relative or absolute) to a file whose format is recognized by Xia

3. Adding images to the background image is possible by importing them and applying them a white background
4. It is possible to modify the default behavior of a detail by changing its color background (white, black)
5. The order of the details in the interactive image depends on the order of their creation in Inkscape. Nevertheless, the Inkscape XML editor allows to change this order
6. It is possible prevent the user to access the comments by inserting a clickable icon and / or a password

IV Creating games with Xia

Until now, this document was only about creation of traditionnal "interactive images": background image enriched with cropped details associated with texts.

This kind of interactive image can be used in class in various situations (students progressively discovering a document, or creating an interactive image on their own), but Xia introduces new features, such as the creation of games and activities, in which the final user has much more to do than simply clicking on details in order to read the comment.

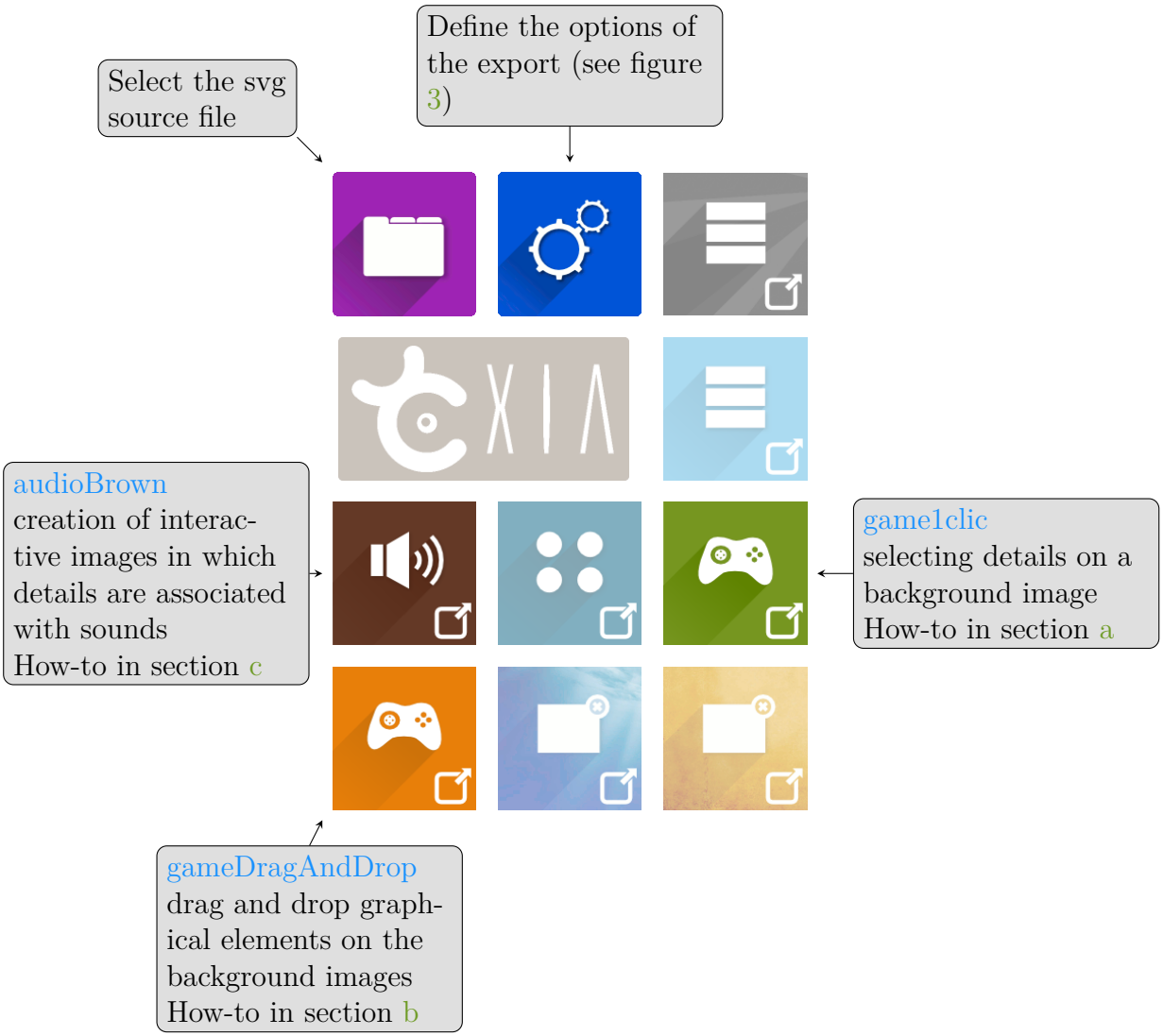


Figure 7 – Xia's games and multimedia templates

a First game principle: selecting, finding elements in the image

The game principle described in this section consists in selecting details on a background image. When the user has reached the goal described in the instructions, a message appears in a final pop up.

Goal	Enter the number of correct answers needed to complete the game	Display a message
Tag	`<score></score>`	`<message></message>`

Example	`<score>6</score>`
	`<message>Congratulations!`
	`You have completed the game!</message>`	

Table 1 – Sum up of tags in a game1clic game

Explore the interactive image created for this section of the documentation.

Download the svg source file.

This kind of game is almost the easiest way to create an interactive image. You only have to crop the details that the final user will have to select.

The instructions must be completed in the metadata of the document. Xia will look into the informations filled in the `Description` field of the metadata of the document (see section a: `File → Metadata of the document`), and create an instruction « pop up » that will show up at the opening of the game. The player will just have to read the instructions and close the pop up to play the game.

When the user completes the game, a message automatically appears. This message has to be filled in the `Description` field of the `Object Properties` of the background image.

Two informations are needed in order for this message to pop up : the exact number of details that have to be selected [11] and the message itself (see table 1).

Text inserted inside the `<message></message>` tag can be enriched. Images, videos or sounds can be inserted. It is also possible to insert a link, allowing users to play another game, in order to "chain" activities up by degree of difficulty.

Once your svg source file is created, choose the template `game1clic` to generate the interactive game.

b Second game principle: classyfying, ordering, ranking

The second kind of game that can be created with Xia consists in dragging and dropping graphical elements on the background image. If all the elements have been dropped on their corresponding drop zone, a pop up message appears, confirming the achievement of the game.

Explore the interactive image created for this section of the documentation.

Download the svg source file.

11. This number does not have to match the number of details on the image.

	Graphical element (drag and drop objects in the game)	Cropped detail (drop zone)
ID Field		`Detail_Title`
Description Field	`<target>Detail_Title</target>`	

Table 2 – Sum up of tags in the gameDragAndDrop template

This is how you can create a game based on the drag and drop principle :

1. In Inkscape:
   — Choose and import a background picture
   — Create the graphical elements the users of the interactive image will have to drag and drop (ie. images or group of words: see below for a how-to)
   — Create the instruction pop up in `File → Metadata of the document → Description` [12]
   — Using metadata, make each label match its drop zone (actually being cropped details)
2. In Xia
   — Export the svg source file using the `gameDragAndDrop` template

Two methods can be used to create the drag and drop "graphical-elements". A very simple way is to use a screenshot tool, in order to create png files, and then import them in Inkscape. It is also possible to create these elements directly in Inkscape, by creating a text, grouping it with a shape, and finally making a bitmap copy of this group (`Edition → Make a bitmap copy`)

The graphical elements then have to be associated with their drop zone [13]. In order to do that, make the `ID` field of the drop zone match the `Description` field of the drag and drop graphical element. The only subtlety consists in the `<target></target>` tags which have to be filled in the `Description` field.

You will find in the table 2 an abstract of the metadata to be filled in the `Object Properties` of the drag and drop graphical elements and the corresponding details in order to make them match.

Once your svg source file is created, choose the template `gameDragAndDrop` to generate the interactive game.

c Third game principle: collisions

The game principle described in this section consists in moving objects within bounds you defined. Typically, the "collisions" game principle can be used to create mazes or gem puzzle.

Explore the interactive image created for this section of the documentation.

Download the svg source file.

12. Exactly as in the game1clic template.
13. **One** object can only match **one** drop zone.

In order to create this kind of game, add the tag `<collisions>on</collisions>` to the background image. All the details will then become solid and will prevent objects (png imported files or bitmap copies of shapes created in Inkscape) from being moved through them.

The "collision" game is in fact a gameDragAndDrop game, since the goal remains to drag one or several objects and drop them somewhere on the image. The requisite tags for this template are therefore the same as in the gameDragAndDrop template [14], but you will apply the `<collisions>off</collisions>` tag to the drop zone's `Description` field.

Once your svg source file is created, choose the template `gameDragAndDrop` to generate the interactive game.

d *Advanced interactive games creation tips*: Magnet effect, tooltips, double-scoring...

Showing the player's score (game1clic template)

It is possible to display graphical elements automatically when the user selects the correct answer. These elements can be png imported images or shapes directly designed in Inkscape. But as Xia considers as a clickable detail any shapes designed using Inkscape tools, you will have to transform these shapes in bitmap, using the "bitmap copy" Inkscape tool. For example :

1. Draw a star with yellow sides on a yellow background with the Inkscape tools
2. Select this star, and click on the `Edition` → `Make a bitmap copy`
3. Delete the first star

When the graphical elements are imported (png files) or created (bitmap copy of shapes created manually), just apply the following carasteristics to these elements:

`Interactivity > OnClick` = `off`

Then, group the clickable detail to its graphical element (by successively clicking on the detail and the graphical element with the Shift ⇑ keystroke on), then select `Group` in the Inkscape `Object` menu.

Showing the player's mistakes (game1clic template)

Games based on the details selection principle are obviously very interesting educational games... but it is also quite obvious to guess how some students may be tempted to cheat to achieve such games (for example, by frenetically clicking everywhere on the image, until the final message pops up).

This is why it may be interesting to be able to highlight the user's mistakes during the game.

To do so, you will anticipate the user's probable mistakes, and put explicit graphical elements symbolizing these errors on the background image. This graphical element may be an imported image (png file) or a shape directly designed with

14. `<target></target>` on the objects, `<score></score>` and `<message></message>` on the background image: see section b.

the Inkscape tools, then converted into bitmap (see section d).. These elements will have to include the following caracteristics:

`Interactivity > OnClick` = `disable-score`

When applied with a `disable-score` tag, a detail still remains clickable, but does not add a score to the counter that delivers the final success message pop up.

How to add a "magnet" effect (gameDragAndDrop template)

If you indicate `<magnet>on</magnet>` in the `Description` field of the drop zone, a magnet effect will then be active when the player drops the graphical element onto its matching drop zone.

Links on drop zones (gameDragAndDrop template)

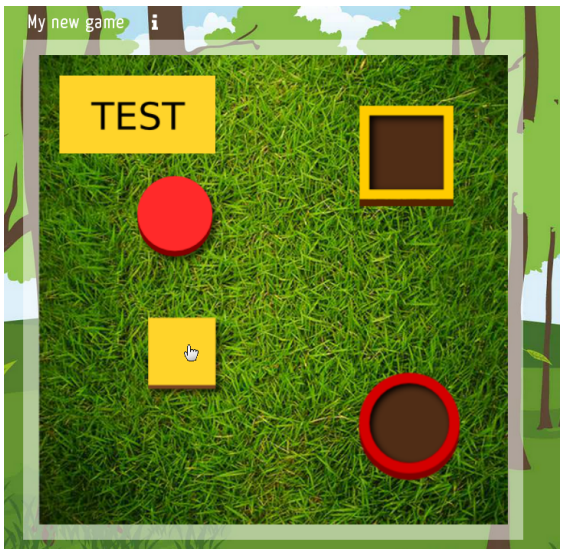
You can insert links in the `Title` field of the `Object Properties` of the drop zones. The user can then open the link by clicking on it or by dropping its corresponding detail on it.

Tooltips (game1clic and gameDragAndDrop templates)

Explore the interactive image created for this section of the documentation.

Download the svg source file.

It is possible to display tooltips of details on mouse-over. To do so, create the tooltip with a png imported file or a bitmap copy (see section d) of a text created in Inkscape [15], and apply to this tooltip a specific `ID` in its `Object Properties`. Then, just apply the tag `<tooltip>specific_ID_of_the_tooltip</tooltip>` in the `Description` field of the `Object Properties` of the detail that is supposed to make the tooltip appear (for example, in the image below: on mouse-over, the yellow square makes the tooltip “Test” appear):



15. Or a bitmap copy of a shape grouped with some text...

Note that the tooltip tool is available in the game1clic and in the gameDragAndDrop templates.

Double scoring (game1clic and gameDragAndDrop templates)

If you indicate `score2` in the `onclick` field (`Object Properties → Interactivity`) of the detail, and if you use `<score2></score2>` and `<message2></message2>` in the `Object Properties` of the background image, you create a double scoring game. In this kind of game, the user can select two different categories of details, two messages can pop up at the end, depending on the category and number of details the user has selected.

For example, you can create a game with 3 details tagged with `score2` (corresponding to mistakes), and indicate in the `Object Properties` of the background image:

```
<score>4</score>
<message>Hurray!</message>
<score2>3</score2>
<message2>Three mistakes...  that is a bit too much...  Concentrate more
and do it again</message2>
```

e Abstract

These tables sum up the tags that have to be indicated when a game is created:

V Frequently asked questions and Inkscape tips

a FAQ

I can not see the Xia extension in Inkscape. Why?
→ Have you installed Inkscape first? If not, you must install Xia. If you use the portable version, Xia does not appear in the extension menu.

The "source file" icon does not appear when I launch Xia from the extension menu of Inkscape. Why?
→ When you launch Xia as an Inkscape extension, there is no "Source File" button, since Xia assumes you want to create the html5 animation from the image you are working on in Inkscape. Just choose the exportation options and the template.

I have installed Xia but I can not find it. How can I launch it?
→ Xia can be found in the "Applications" of Mac OS X. On a GNU/Linux system, the Xia package is called "xia-converter". In Windows, Xia is only an Inkscape extension. If you wish to launch Xia without Inkscape, use the portable version.

I have added some text on my image with the Inkscape text tool ("Create and Edit text objects"), but it does not appear on my interactive image. Why?
→ Unless you make a bitmap copy of the text, Xia will consider the text created with the "Create and Edit text Objects" as a detail, and not an image.

b Inkscape tips

— Don't hesitate to fill your details with different colours. The details will be easier to select and modify, and it will not have any consequences on the html5 animation (unless you choose black or white as filling colors)

— If you want to create one detail out of several, you can "Group" them (`Object` → `Group`, or Ctrl + G) or "Unify" them (`Path` → `Union`, or Ctrl + +).

— Once a detail is created, it is always possible to modify it: you can add or remove nodes, move them, etc. Just double-click on the detail, and use the modifying tools:

— Some keyboard shortcuts are real time savers!

1. Shift ⇑ + Ctrl + a to access the `Alignment and Distribution` tools
2. Shift ⇑ + Ctrl + o to access the `Object Properties`
3. Alt + b to create a bitmap copy of a shape designed in Inkscape
4. Ctrl + g to group different objects or details and Ctrl + Shift ⇑ + g to ungroup them

game1clic template		
<score></score>		
	Role	Sets the amount of correct answers needed to pop up the end message of the game
	Element	Background picture
	Where ?	Object properties → Description
	What ?	A number corresponding to the required score
<message></message>		
	Role	Pops up the end message of the game
	Element	Background picture
	Where ?	Object properties → Description
	What ?	A personalized message if necessary enriched with multimedia or html links
off		
	Role	Makes a cropped detail unclickable
	Element	Detail
	Where ?	Object properties → Interactivity → Onclick
disable-score		
	Role	Makes a cropped detail clickable, but when clicked, does not add a point to the score game counter
	Element	Detail
	Where ?	Object properties → Interactivity → Onclick
score2		
	Role	Makes a detail add a score to the score2 counter
	Element	Detail
	Where ?	Object properties → Interactivity → Onclick
<tooltip></tooltip>		
	Role	Displays a tooltip when moused-over
	Element	Detail
	What ?	Make sure to match the ID of the element used as tooltip
	Where ?	Object properties → Description
<score2></score2>		
	Role	Sets the amount of correct answers needed to pop up the second end message in a double scoring game
	Element	Background picture
	Where ?	Object properties → Description
	What ?	A number corresponding to the required score
<message2></message2>		
	Role	Pops up the second end message in a double scoring game
	Element	Background picture
	Where ?	Object properties → Description
	What ?	A personalized message if necessary enriched with multimedia or html links

Table 3 – Complete game1clic tags

gameDragAndDrop template		
<score></score>		
	Role	Sets the amount of correct answers needed to pop up the end message of the game
	Element	Background picture
	Where ?	Object properties → Description
	What ?	A number corresponding to the required score
<message></message>		
	Role	Pops up the end message of the game
	Element	Background picture
	Where ?	Object properties → Description
	What ?	A personalized message if necessary enriched with multimedia or html links
<target></target>		
	Role	Indicates the corresponding drag and drop element and drop zone
	Element	Graphical element to move
	Where ?	Object Properties → Description
	What ?	Make sure to match the ID field of the drop zone
<magnet>on</magnet>		
	Role	Adds a "magnet" effect
	Element	Drop zone
	Where ?	Object Properties → Description
<collisions>on</collisions>		
	Role	Activates the "collisions" game principle
	Element	Background picture
	Where ?	Object Properties → Description
<collisions>off</collisions>		
	Role	Creates a drop zone in a "collisions" game
	Element	Drop zone
	Where ?	Object Properties → Description
<tooltip></tooltip>		
	Role	Displays a tooltip when moused-over
	Element	Drop zone, Graphical element to move
	What ?	Make sure to match the ID of the element used as tooltip
	Where ?	Object properties → Description
<score2></score2>		
	Role	Sets the amount of correct answers needed to pop up the second end message in a double scoring game
	Element	Background picture
	Where ?	Object properties → Description
	What ?	A number corresponding to the required score
<message2></message2>		
	Role	Pops up the second end message in a double scoring game
	Element	Background picture
	Where ?	Object properties → Description
	What ?	A personalized message if necessary enriched with multimedia or html links

Table 4 – Complete gameDragAndDrop tags

— If you create your interactive image directly with the Inkscape drawing tools (with bitmap copies of shapes or imported images), it is highly recommended to group all the objects, make a bitmap copy of them, and use this bitmap copy as a background image. Otherwise, some images or bitmap copies may disappear in the interactive image when details in top of them are selected (since the main purpose of a detail is to let the user see the background image when selected).

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