

EXPLANATORY SHEETS: SIGIL

Reminder: These roadmaps will allow a better understanding of the workflow of digital interactive contents production through practical recommendations and testimonies of professionals.

In that way, we intend to support learners and teachers in their learnings but also after the training, in their practical working life.

1. About the technology

The technology used	The ePub
Final objective and result	Creation of a digital book in ePub3 format that will be available on a computer, tablet or phone thanks to a reading application.
Description of the tool	The ePub is a format allowing the creation of digital books, also called ebooks. The ePub3 (current version) allows the integration of sound, video and interactivity. This type of digital book is accessible to the visually impaired.
Medium used (computer, tablet, phone)	This digital book is readable on a computer, tablet and mobile phone using a reading application.
Where will it be accessible (app, platform, website...)	Thanks to the use of a reading application, the ePub is readable without internet. The following applications allow to read the ePub. Apple Books (for Apple devices), Readium (for computers) and Lis-a (for Android devices).
How long did it take to develop this tool?	The development time of an ePub depends on the amount of content you want to add to it. This exercise will take you 40 minutes to complete the ePub. Downloading the software: 5 minutes Finding the elements: 10 minutes Designing: 25 minutes Extracting: 1 minute



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2. Used software

Name of the software	Sigil
Name of the company	Developed by Strahinja Markovic
Copyright status (cc, proprietary system, etc)	Sigil is an open source publisher of digital books, i.e. the license of this software respects criteria precisely established by the Open Source Initiative: the possibilities of free redistribution, access to the source code and creation of derivative works.

In case you have used additional resources for the content of your tool, please describe them below:

None.

3. Cost

Cost of the creation of this tool	0€
General pricing plan	No pricing plan.

In case you have used additional resources for the content of your tool, please detail their cost below:

None.



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4. Steps of production

Please describe each step of the production of the tool

Design phase

Why did you create this tool?	Since the eBook is an electronic medium, it has additional functions that a paper book does not have, such as sound or moving pictures. eBooks are also interactive, since it is possible to have links to several data sources: additional videos, hyperlinks, etc. These options make it fun and entertaining for the user. Digital books also provide a social opening to the world for people with disabilities. Some features, such as the possibility of increasing font size, make it easier for visually impaired people to read. Furthermore, the use of audio as a support for text or the addition of various videos are also very useful and would make it possible to design books adapted to people with disabilities.
What functionalities does it have?	The ePub has text, images, video, sound, and hyperlinks.
What will be its purpose? (pedagogical, communication, games, etc.)	The objective of the creation of an ePub is pedagogical. The learner has to ask himself how to transmit a certain amount of information and how he has to format his contents in a book.

5. Creation phase

Please name and describe below the different steps of the creation of the tool (min 5)

Preparation	To use this software, we recommend that you have already prepared the content (text, image, sound) in a folder. Each content must be correctly renamed (image1, image2, etc.). Don't hesitate to use royalty-free images and sound, you can find a lot of content in image and sound banks on the internet.
Metadata	Before starting to create an ePub, you have to register your work. To do this, go to File → Save , give it a name (example: the_planets), then save it wherever you want.



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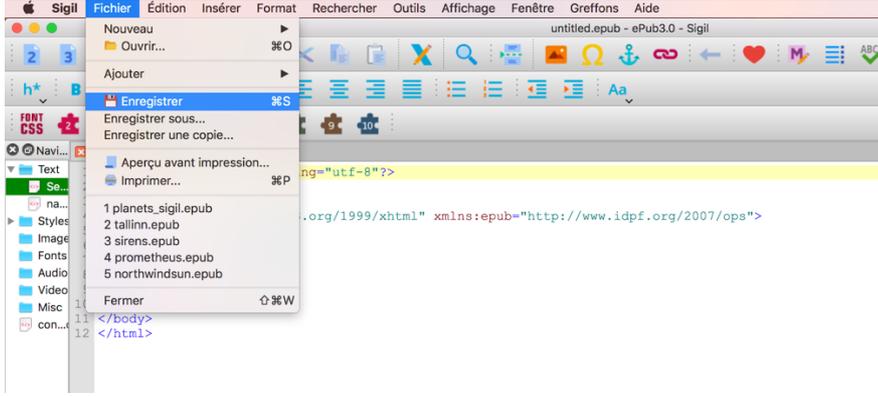
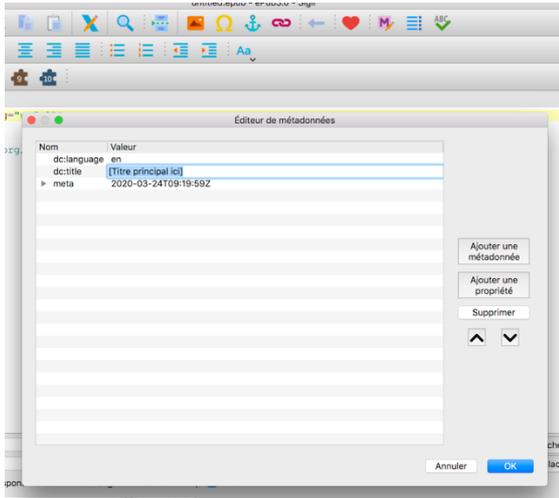


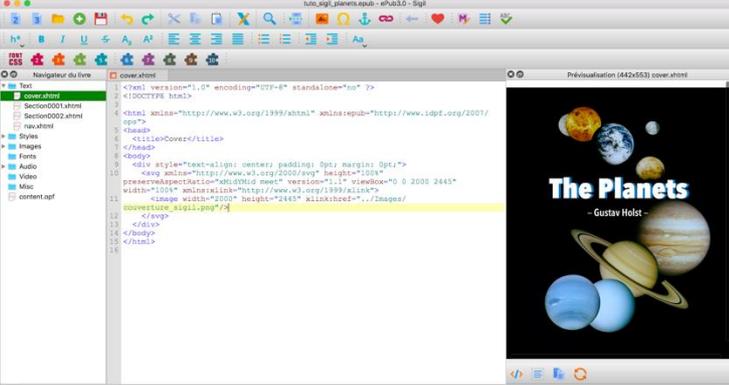
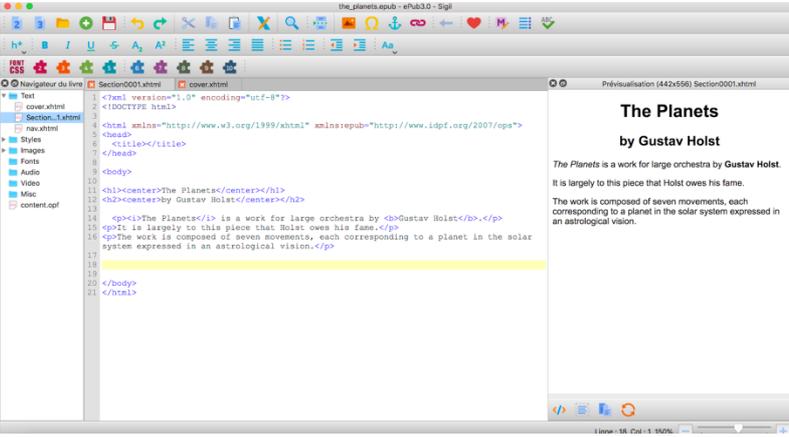
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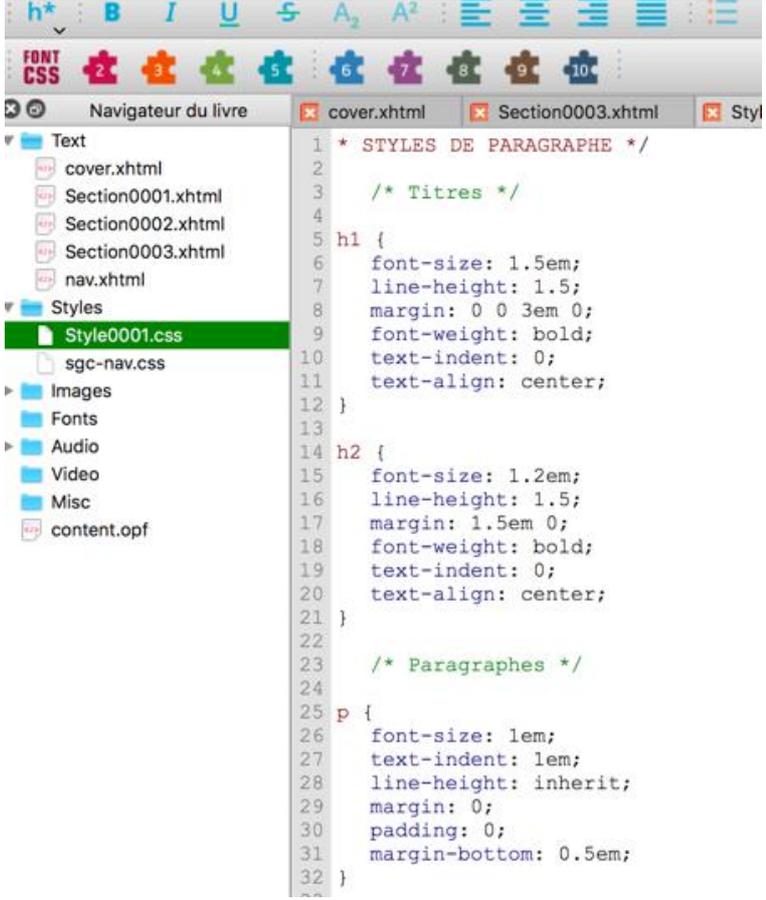


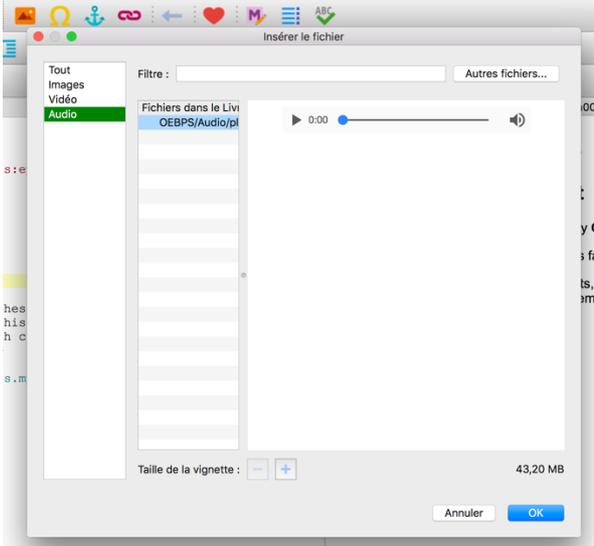
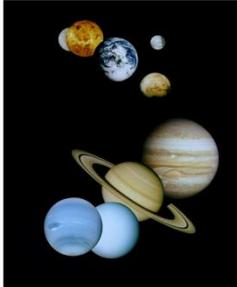
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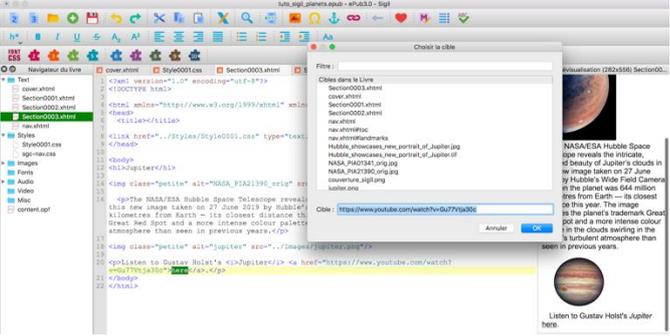
	 <p>It is then necessary to give a title to the ePub, it is the title of the book. To do this, click only the pink "M" in the toolbar and fill in the line [Main title here]. In this exercise, name it <i>The Planets</i>.</p> 
<p>Add a cover</p>	<p>To add a cover to your EPUB, go to Tools → Add a cover. For this exercise, the image used is called "cover.png". A new cover.xhtml page is automatically created in the Browser menu of the book.</p>

	
<p>Adding text and modifying its CSS characteristics</p>	<p>You can add text to your book, and it is also possible to modify the characteristics of this text: italics, bold, etc.</p> <p>Double-click on Section0001.xhtml, you will arrive on a new blank page. To add text, simply copy and paste it from another document or write it directly into the page. To link your stylesheet, you must add the tag "<code><link rel="stylesheet" href=" ../Styles/Style0001.css" type="text/css" /></code>". This tag must appear in all your xhtml files, and between the two head tags.</p> <p>To italicize text, simply place it between the <code><i></code> <code></i></code> tags. To put text in bold, use the <code></code> <code></code> tags. To format the text, create a CSS stylesheet in the Styles folder and link it to the pages in Text.</p> 

	
<p>Add audio</p>	<p>It is possible to add soundtracks, it can be a narrator reading the text or a music, a sound atmosphere. To add audio, click on the orange image icon in the toolbar. Then click on More Files... and select the file.</p>

	
<p>Add an image and change its characteristics</p>	<p>You may decide to illustrate your book with photographs, illustrations, animated images. To insert an image, just do the same manipulation as for inserting audio. Click on the orange image icon in the toolbar and insert the image.</p> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>This is an updated montage of planetary images taken by spacecraft managed by NASA's Jet Propulsion Laboratory in Pasadena, CA. Included are from top to bottom images of Mercury, Venus, Earth and Moon, Mars, Jupiter, Saturn, Uranus and Neptune.</p>  </div> <p>It is also possible to modify the characteristics of an image: enlarge or reduce its size, etc. To change the characteristics of an image, this is done in the CSS style sheet. For these two images, add class="small" in the tag. Then in the CSS style sheet, fill in the characteristics you want.</p> <pre> 3 4 5 </pre>



	<pre>59 60 img.petite { 61 width: 10em; 62 } 63</pre>
<p>Add a link to the internet</p>	<p>You can enrich your book with additional content such as hyperlinks. These internet links can lead to videos, articles, etc.</p> <p>To create a hypertext link, simply select the text you want to make clickable, click on the string icon in the toolbar and fill in the "Target" field with the link. The text will automatically go between the <a> tags.</p> 
<p>Check the validity of the ePub</p>	<p>You can click on "Validate EPUB" to perform a complete validity check of the file. Deficiencies will be notified in a window below the main area. They will have to be corrected one by one to ensure that the document is readable by all.</p> 
<p>Read the eBook</p>	<p>By saving your file in File -> Save, it is automatically saved in the ePub format. You can now open your ePub with a reading application (eBook Reader, Apple Books for example) or change some things if the layout doesn't suit you. You can come back to your ePub file as much as you want to modify it!</p>

6. Test phase

Has the tool been tested by somebody else than you?

- If yes, please fill in the following questions
- If no, go to question 7

Number of users	20 learners
Category of users (teachers, youngsters, professionals, etc.)	Students in Master 2 Multi-media editorial creation
Cumulated time of test by the users	2h30

Please describe the test of the tools

- Presentation of various enriched digital publications.
- Joint identification of the innovative actors (design, production, distribution) in this field.
- Discussion on possibilities and limitations of the enriched epub3 format
- Reconstruction of the model with the participants in epub3 FXL format

What did you learn from it?

- Identify the possibilities and constraints of the epub3 format (Reflowable & FXL)
- Designing an enriched publication and producing the associated working papers
- Creating an enriched publication using Sigil

Did you change anything in the content after the test?

After this first test, I added a session to introduce the subject with more details.

If yes, please explain the different steps:

To introduce this project, I added a demonstration session of existing content with analysis by each learner of innovative concepts.

- New modes of narration
- Overview of creation/realization tools
- Reading media and software (differences and compatibility)



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- Modes of diffusion and distribution

Release

Where did you publish the tool?	The digital book has been published on Google Books (Google Play).
Why?	We have chosen this store to make the book accessible to everyone.
Have you encountered any difficulties in this step?	The only difficulty encountered was the time to provide an ISBN.
If yes, please explain	In order to publish the book on Google Play, you are required to provide an ISBN yourself. We had to request an ISBN from the AFNIL (France).

7. [Inclusive approach](#)

What action did you implement to make this tool inclusive to as many users as possible?

Digital book features such as increased font size, audio and video are useful because they make reading easier for the visually impaired.

8. [Good / bad practices](#)

Would you recommend this software to the users?	Yes
Please explain	Sigil is a free and open source software that allows you to create files in ePub format. It also makes it easy to include metadata in ePub. It is available under MAC, Linux, and Windows. Sigil is very easy to use software.

What recommendation would you give to people creating such tool or creating content on this technology?

Attention, it only allows to create reflowable ePub. The ePub reflowable has a "liquid" layout, adaptable to any medium. The reader chooses the display options: font, background colour, margins. The text adjusts automatically. Unlike ePub fixed layout, which fully respects the



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layout of a document. It is impossible for the reader to change the layout of the book. In the case of an ePub on Sigil, the reader will be able to change the layout via the display options. If this may be inconvenient for the book publisher because he has imagined a certain layout, this is a plus for the reader because he will be able to adapt the book according to his own reading.