

New technology and non technical students: making contact with creative digital writing

Digital art can be viewed as the age when artists questioned the legitimacy of, and the proximity between, art and new technology. They had to learn the use of new tools, programs and methods, and acquaint themselves with technical expertise (programmers and engineers) collaborations...

With post-digital art, I make the hypothesis that the legitimacy of art's relationship with new technology (which has been validated) is no longer the crucial issue, and shift the focus onto the interrogation of this hybrid's specific characteristics. Many artists now use new technologies for their works; it is an unexceptional situation.

In this work, my intention is not to describe an occurrence of this hybridity but to reflect on how this breed of production can be profitable; how the factor of art can be used to interest people who are apathetic towards new technologies. In other words what could be the social position of digital art?

This text proposes a unique way of using creative tools to open up a post digital methodology – how we can invite non-technical students to enter the domain of new technology and impart the skills necessary to use interesting tools in the future.

1 Teaching digital writing:

In the second semester, I had the opportunity to teach a class on digital writing to approximately twenty Master students. Most of my students came from the Literary Translation department and some others from a department about Digital Issues. With few exceptions, the overwhelming majority of these students had no background in computer science.

The class curriculum was constructed on three principal axes:

- Provision of a cultural capital to understand the nature of digital literature through the presentation of a corpus of works. Some examples of works showcased can be found on the Youtube channel “Signes, forms et Figures”.¹
- A theoretical discourse base to aid the students in observing, evaluating and criticizing the works, and a global perspective of digital writing enabling them to move towards a more macro vision in their observations.
- Creative workshops which allowed the students to experiment with different aspects of digital creative writing while encouraging the expansion of their imagination

The class comprised of 13 lessons, each lasting 3 hours. The last lesson was dedicated to the presentation of every student's final piece of work (each student had to create an original text to validate the class).

The other 12 lessons were divided into 3 cycles. Each cycle was composed of 3 sessions and ended with a creative workshop. A workshop begins with the presentation of the exercise to do, then the students work on it. At the end, some voluntaries presents their work.

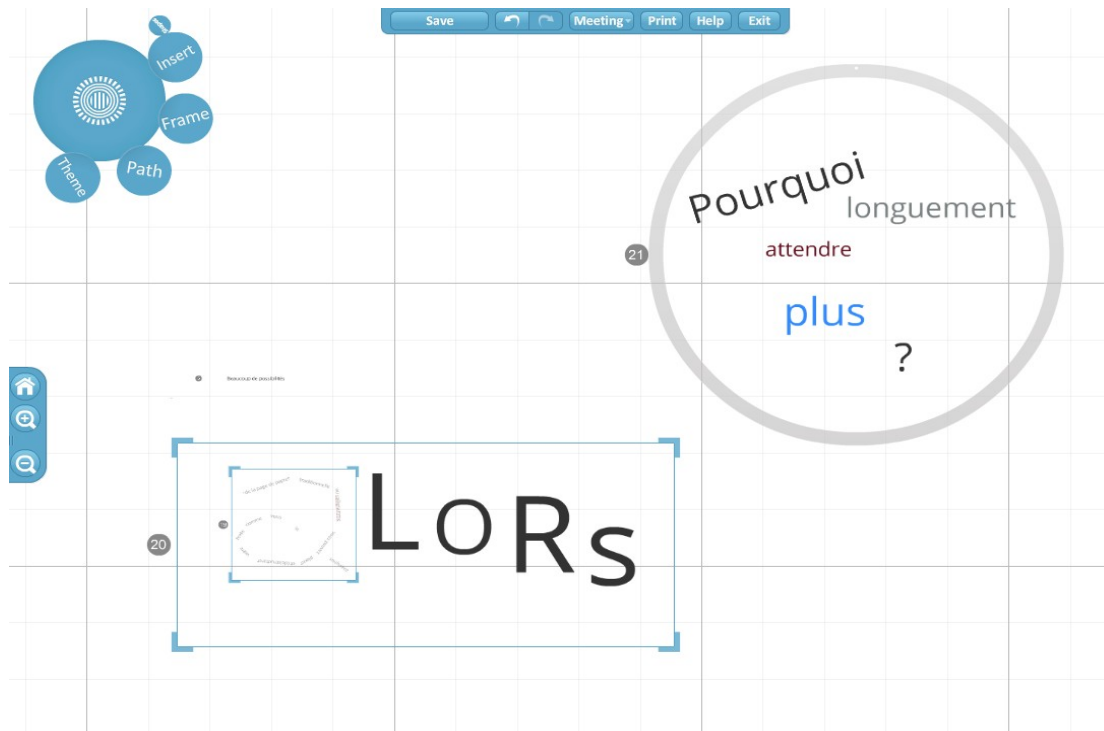
The first cycle was consecrated to the theme “Le texte juste le texte?” (*Just the text?*). In the beginning lessons, purely text-focused digital writing produced without images was explored, with a perspective of the

¹ http://www.youtube.com/user/signesformesfigures?feature=results_main

links that could be created in this minimalist setting. Among other examples, works from Heavy industry such as *Dakota*² were looked at.

At the end of the cycle, the students had to create an animated text with Prezi.

1.1 Prezi:



Prezi³ is a cloud-based web service/software that is usually used to create presentations like Power Point or Keynote. It was not originally intended for the writing of digital poetry or the creation of literary works but has a great potential and lends itself well to these purposes.

Prezi can be used for free but the presentations created on the website are accessible by anyone. It is possible to buy this software (Prezi Desktop) which enables one to control the privacy settings on the publications.

Prezi provides many possibilities for the non-technical to play with a text's presentation as it is used very intuitively and the creation of animations is hassle-free.

The text can be placed anywhere on a "desktop"?, in a multitude of positions and sizes.

Some e-writing playing with animated text like the Young Hae Chang Heavy Industrie⁴ works can act as an inspiration in the play of a text's presentation (even if the works of YHCHI are made in Flash and there is extensive work on music and its synchronisation/de-synchronisation with the text which is not possible with Prezi). The research on textual? superposition by Jim Rosenberg with his diagram poems⁵ is another potential stimulus for creative work that could be done on Prezi.

² <http://www.yhchang.com/DAKOTA.html>

³ <http://prezi.com/>

⁴ <http://www.yhchang.com/>

⁵ <http://www.well.com/user/jer/whatsnew.html>

For the students' first workshop⁶, after showing some simple examples of how a text's presentation can be played with, I suggested that the students continue a Haiku which was an extract from Lutz Bassmann's (alias Antoine Volodine) book *Haikus de prison*⁷, using Prezi to present the text in an original fashion. It was an interesting experiment even if most of the students chose to use their time to work on visual design rather than writing.

Besides being user-friendly, Prezi also has another strength which is intrinsic to its cloud-based nature of existence. This enables different users to work on a common Prezi canvas simultaneously, and also the real-time presentation of a text in its creation. This collaborative aspect can be very profitable during a writing workshop: an entire class can contribute to and interact with the works of the others at the same time.

The problem is that there are still some (strange) bugs when the number of people on a text exceeds five people. Also, the visualization system is not very strong, but it can be an interesting tool for experimentation.

The second cycle "Parcours libre" (Free Run) was very general and open. It was a presentation of some digital poetry, Interactive Fiction and Hypertexts works and theories.

1.2 Interactive Fictions:

The workshop consisted of creating an Interactive Fiction with a specific program called Inform⁸ (Version 7).

"Inform is a design system for interactive fiction based on natural language. It is a radical reinvention of the way interactive fiction is designed, guided by contemporary work in semantics and by the practical experience of some of the world's best-known writers of IF."⁹

Interactive fictions are text where the reader can make choices and follow different paths accordingly. In the informs-like Interactive fictions (that are often called IF or just Interactive Fictions because they are more popular), the reader has to type out his desired actions on the interface, to advance in the story. For example, if in the story he wakes up in a room, he can ask to "look", to "open the door", to "go north", etc.

The first version of Inform was developed in 1993 by Graham Nelson.

⁶ <http://prezi.com/mh2lgzcrhcwc/formes-figures-4-contrainte-decriture/>

⁷ Lutz Bassman, *Les haïkus de prison*, Verdier

⁸ <http://inform7.com/>

⁹ Ibid

Your pager tickles you awake.

Upstairs in the house of your childhood, in your room, and it must be time for school because – no, it's the weekend, you remember, but your alarm is going off anyway. You should have been awake already. You're going to miss the bus. Your mother climbs in the window. You're dreaming.

You're a grown-up: It opens to you again, a sluggish window summoned by a mouse click. Waking up now in your own apartment, your new apartment. Your pager is buzzing and vibrating both, serious. It is in fact the weekend, but you're not in elementary school. No one is crawling in through the window. You're a system administrator for nWare. Waking up urgently, here in nTopia.

Home

The constellations on the ceiling are as you left them: Pisces, Cetus, Aquarius, and the ones without celestial referent, left by some crazed astronomer in residence here before you. What could you call them? The Cradle, The Way, The Burning Book...

They're still glowing, too. Must not have napped for long.

> wake up

You're awake enough, and can get off the couch if you like.

The pager buzzes and jars you, its motor driven to disrupt and demand attention. This is no Harry Potter broomstick.

> look

Home

The glow-in-the-dark stars are about all you can see. Despite the disorientation, you do at least recall where the light switch is.

The pager vibrates like it's repeatedly tapping you to get your attention, and it buzzes gratingly.

> stop the pager

If it were only so easy. You have to listen to whatever messages are on there to get the thing to stop.

The buzzing of the pager continues. You are tooth to the dental drill of the device.

> push the button

An example of Interactive Fiction: *Book and Volume* by Nick Montfort¹⁰ on Splatterlight

An interpreter is needed to read an Interactive Fiction. The two most famous IF readers are:

- Splatterlight¹¹ for Mac.
- Gargoyle¹² for PC.

To create an Inform file, simply download the Inform 7 suit¹³; the software is available for all operating systems (Linux, Mac and Windows). Although the Inform editor uses a specific code to create IF which has to be learnt before the creation of a text, this language is very easily acquired because it is close to natural language (high level) and can be a good introduction to programming.

To begin a text, a room has to be created with the sentence “The [name of the room] is a room”. A description of the room can be added and it can be filled with different objects (containers, furniture, people...). Other rooms can be created and connected to the original, certain conditions or a timer can be imposed ...There are endless possibilities allowing a complete customization, and one can even add extensions¹⁴ providing new options (for example, an English-French translation plugin for the interactions vocabulary).

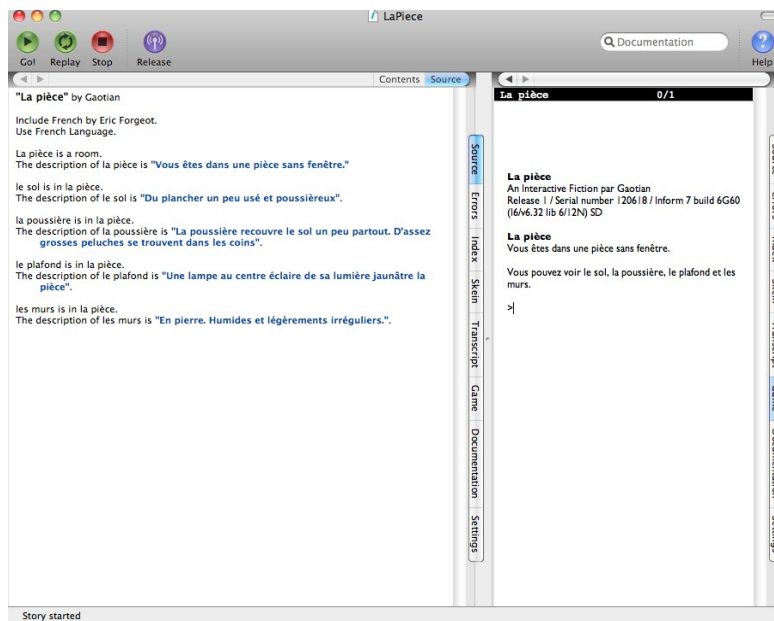
¹⁰ http://nickm.com/if/book_and_volume.html

¹¹ <http://ccxvii.net/spatterlight/>

¹² <http://ccxvii.net/gargoyle/>

¹³ <http://inform7.com/download/>

¹⁴ <http://inform7.com/write/extensions/>



Above, the Inform 7 interface. On the left, the window where you write the code, on the right, the window where you can run what has been written, read the documentation or see the structure of your text.

A lot of Interactive Fictions have already been written with Inform and there is a cornucopia of excellent references for students, such as the texts *Book and Volume* from Nick Montfort¹⁵ or *Bad Machine*¹⁶ by Dan Shiovitz.

During the workshop, the students were offered the choice between three subjects¹⁷:

- Open a chest: tell a brief story about a container. This path is a good opportunity to learn Inform as the technical exigence is limited and synchronised with the development of the storyline: create a container, close this container and made it openable with another specific object, use the “instead” system...
- Digital Poetry: create an Interactive abstraction where rooms are not really places and where north is not the opposite of south... In this theme, the student can exploit, as opposed to being disadvantaged by, possible bugs - they can play with the code and explore the boundaries of the program.
- No limits: the students can use Inform in the manner they want, to create an IF.

After all the lessons in the semester had ended, I was surprised to discover that the workshop with Inform had been the most popular (every student who had answered the evaluative questionnaire at the end of the semester voted for Inform as their favourite workshop). Inform is not the most user-friendly software compared to those practised in other workshops, but it is distinctive from the other programs which were familiar to the students through their experience with blogs/social networks.

There are other¹⁸ programs that largely resemble Inform, but have their own specialites. An example is the Hugo¹⁹ freeware (with its interpreter Hugor available for Mac and Windows) which permit the use of multimedia (pictures and sound). Not limiting the fiction to a purely textual dimension can be tempting, but in practice, the textual focus of software like Inform is a way to keep the attention focused on the creation. It is difficult for newcomers to divide their effort between the options offered by modern technology and a literary inspiration when using new digital tools.

¹⁵ http://nickm.com/if/book_and_volume.html

¹⁶ http://collection.eliterature.org/1/works/shiovitz_bad_machine.html

¹⁷ <http://prezi.com/pkcpzmw4fpvx/formes-figures-8-atelier-decriture-2/>

¹⁸ An other famous tools more often used before is TADS http://ifwiki.org/index.php/TADS_2

¹⁹ http://www.generalcoffee.com/index_noflash.php?content=hugo&accessible=true

To publish their works, the students can use an interesting program that interprets and converts Inform 7 code, making it directly usable on the web. The writer of an Inform text just has to copy-paste his code on the Playfic²⁰ platform to make it readable online by everybody. The last version of Playfic integrates the Inform 7 extensions. This was the second workshop.

The third cycle was focused on works on the periphery of text (the video games for example) and the workshop introduced data visualisation tools and how they could be used for creative writing.

1.3 Many Eyes and Data Visualisation

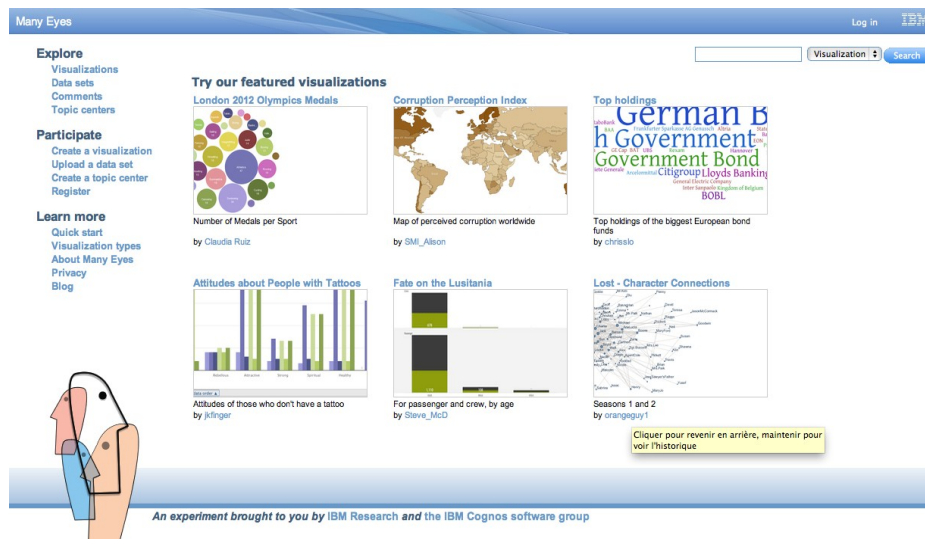
Nowadays it is common to hear about data and a lot of new studies interrogate how we can create tools to produce new types of information. For example, the phenomenon of big data pushes us to think of how new qualitative study interpretations can be made.

Using a lot of data leads to the question of how to read them. The field of data visualisation has to answer this question and since last year, it occupies a growing place in the sciences, and even in our private life.

Well-designed visualisations (graphs, tables, etc.) have a position of authority, they give the impression that the information generated is true. Keeping in mind that the aesthetics can help to validate what is being presented, visualisation can be an interesting way of lying. With this perspective in mind, the workshop was conducted around the play with certain data visualisations tools to generate false graphs, maps or diagrams... and to write.

Many Eyes²¹ is a web platform where the user can send their own data and produce visualisations (with their data but also with every dataset available on the website). The program is deceptively simple, which can result in problems with obtaining ideal visualisations, making it a good compromise to work only with the pre-defined datasets.

After the visualisation has been produced, the user can export it with an embed code on every website or blog. I recommended that the students create a blog on Tumblr²² for their writing, due to its facility of use and to subsequently import the visualisations.



²⁰ <http://playfic.com/>

²¹ <http://www-958.ibm.com/software/data/cognos/manyeeyes/>

²² <https://www.tumblr.com/>

During the workshop²³, I proposed the students three ideas for visualisation-combined writing:

- to describe a feeling and to show how it evolves or to compare different intensities of feeling and to comment on these states
- to create a false “official page” for a small town relating a fictional incident
- to write a poetic incomprehensible text where the visualisation complicates the information instead of clarifying it.

1.4 Using tools to be more creative, be creative and liking to learn how to use tools

With the progression of the lessons, I was surprised to observe the students’ growing fascination and attraction for the technical tools, and their willingness to learn how to use them for creative purposes.

In using these tools for their own projects, the students created their own way of controlling the tools and by trying to use the tools in a 'subversive' manner, had to first learn how they conventionally functioned.

It was an enriching experience, for me and I hope for the student too. But this experiment has pushed me to ask how it could be possible to go further and which tools I had to use in this case.

A short presentation and commentary of some tools that could be very useful to bridge the gap between the non-technical and new technology as well as observations and suggestions for using them according to their particular characteristics.

2 News tools and perspectives:

2.1 Create hypertext and IF:

The distinction we make between Interactive Fiction and hypertext is that the reader has to write to describe the action he wants to accomplish in IF and he has to click on a link in hypertext to go further in the text.

But sometimes it can be more complicated to see the differences (with some IF decoders for example). The two categories belong to the interactive text.

Recently a lot of new tools for reading and creating hypertext has been developed and the tools for IF continue to be improved.

2.1.1 StorySpace:

StorySpace²⁴ is probably one of the most famous writing programs historically (available for Mac and Windows). It is with this software that certain renown hypertexts have been produced, such as *Afternoon, a story*²⁵ by Michael Joyce.

The software is presented as « a hypertext writing environment that is especially well suited to large, complex, and challenging hypertexts. Storyspace focuses on the process of writing, making it easy and pleasant to link, revise, and reorganize. »²⁶

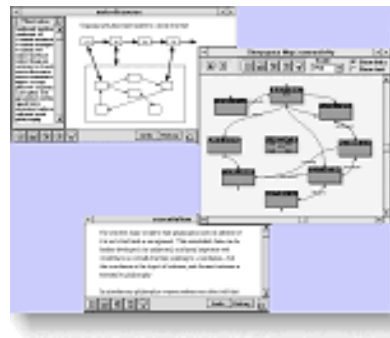
²³ <http://prezi.com/iphxyw2hmbmv/formes-figures-seance-12/>

²⁴ <http://www.eastgate.com/storyspace/>

²⁵ <http://www.wwnorton.com/college/english/pmaf/hypertext/aft/index.html>

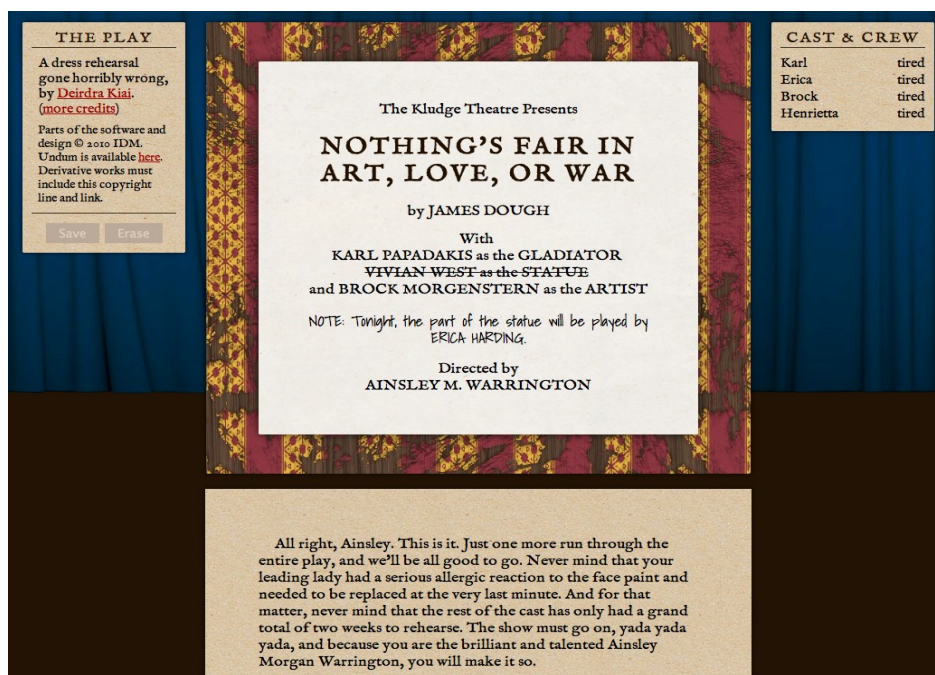
²⁶ <http://www.eastgate.com/storyspace/>

It is not free, in fact it's quite expensive (it costs 295 dollars) and it can be a problem for using it in a class, but there is a free demo version which allows the test of its functionalities and gives the students a preview of what could a professional tool for writing hypertext could be.



2.2 Undum:

Recently, there are some new programs that have been developed and which are free. Ian D. Millington has developed some code for the easy generation of hypertext on the web with HTML5. The solution is called Undum²⁷. The code is downloadable and user-fr but it's preferable to have some basics in HTML programming.



<http://www.deidrakai.com/theplay/>

There is an excellent tutorial created by I.D Millington that shows the possibilities which explain how the program works with the program itself.²⁸

The particularity of the hypertexts created are the following:

²⁷ <http://undum.com/>

²⁸ <http://undum.com/games/tutorial.en.html>

- There is a status box where the state of mind, situation, skill level, moral level... of characters can be described and the elements of this status can be changed by the actions of the readers.
- The hypertext is composed of different sections of smaller texts, the reader can go further in the story by clicking on the hypertexts, the text doesn't always disappear after a decision, only the decision vanishes. This allows the reader to read all his text at the end like a "normal" text if he wants.
- There are two kinds of links: the action links and the links that makes you advance in the story. The actions links can change the status of the characters or change some of the text section where the reader is. The others links change the text section.

The main problem for Undum is that there doesn't really exist an editor for one to write directly without knowing code.

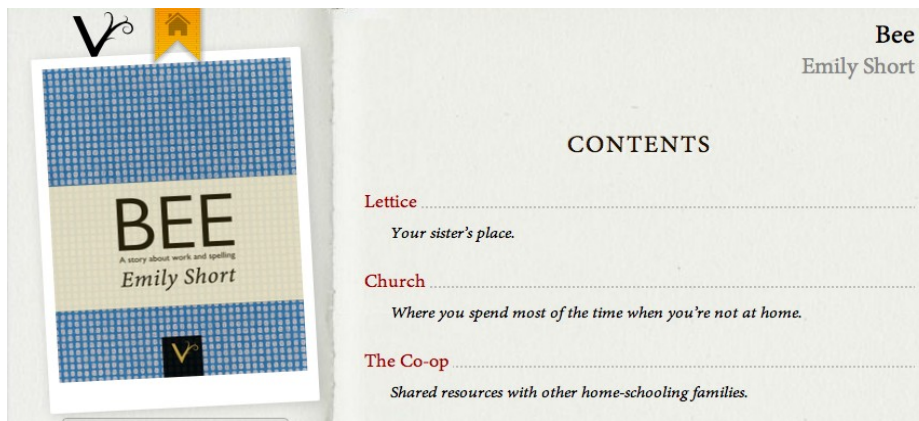
To resolve this problem, its creator has developed a new solution, a webservice called VaryTale, although Undum can be a good introduction to learn HTML.

The strength of Undum is that it is easy to export a creation: it is simply composed of some html pages.

At the same time, there are no pre-established publication tools: you have to publish yourself on a ftp server the files if you want to share the hypertext.

2.3 VaryTale

VaryTale is a platform where you can read and write hypertexts. The structure of the hypertext is not the same as that of Undum. Each hypertext is called a "book" and each book is composed of many sub-texts called "storylets". You can choose the storylet you read. The storylets that you choose influence the story's narration.

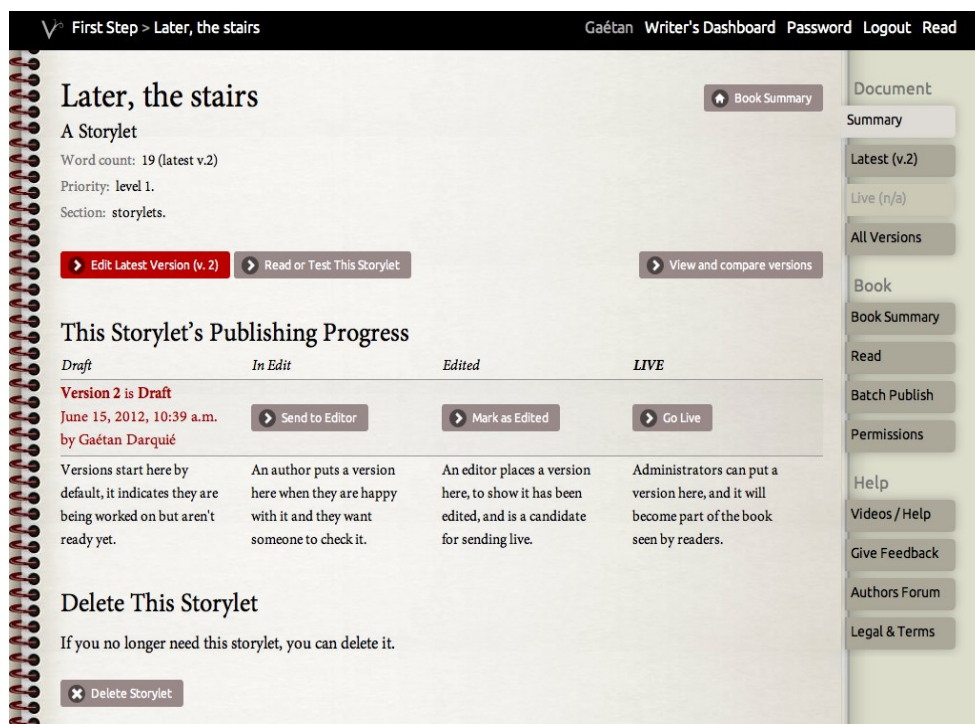


A part of *Bee* from Emily Short where you can select a storylet.



After selecting the storylet, you can read it and sometimes make actions or a final choice. <http://vartale.com/read/>

Inside the storylets, you can make a choice. The choice of a storylet is already an action and can have consequences. When you have commit some action. You discover new storylets.



VaryTale can be a valuable hypertext-writing tool because it's free, user-friendly and doesn't require a programming background.

However, it can pose two problems:

A text can be published automatically if the writer makes a request, but has to be validated by the editor. But if a student wants to share his text, he can download his version and send his files to his teacher.

The main problem is that, for security reasons, the system to create a writer account is not automatic, so you have to ask for permission to subscribe to the platform, which could take some time (although this time has proven to be very short in my personal experience, about a day) but this is not a consideration to be neglected if you want to program a lesson with this tool.

Some others tools can be used in class.

2.4 Visual Novel

Ren'Py²⁹ for example (Py for the Python code with whom it is developed) is a freeware for creating visual novels. Its graphic vocabulary is tainted by manga and Japanese design (visual novels are well-known in Japan). However, despite some childish pictures, the program can be used to create complex hypertexts with a focalisation on text and pictures. Music can be added.



A creation of a student, *Clashing All* by Damien Rembert

3 Other propositions

The hypertexts occupy a very specific and important place in digital creative writing and learning, but it can be combined with other elements and programs. For example, numerous possibilities of new kinds of interaction with Kinect³⁰ are feasible: the body of the user can directly interact with the text. But this combination of different technological tools requires a certain level of computer science skills. I will now present some other tools that can be used for non technical students, along with brief descriptions, that can supplement this list of suggestions.

3.1 3D and augmented reality

The Cave writing editor³¹ is a tool developed by Brown University to simplify the development of applications for its CAVE system³². The CAVE is a 3D environment where you can project videos and text onto four different screens. With goggles and pointers, you are able to interact with and immerse yourself in the projection.

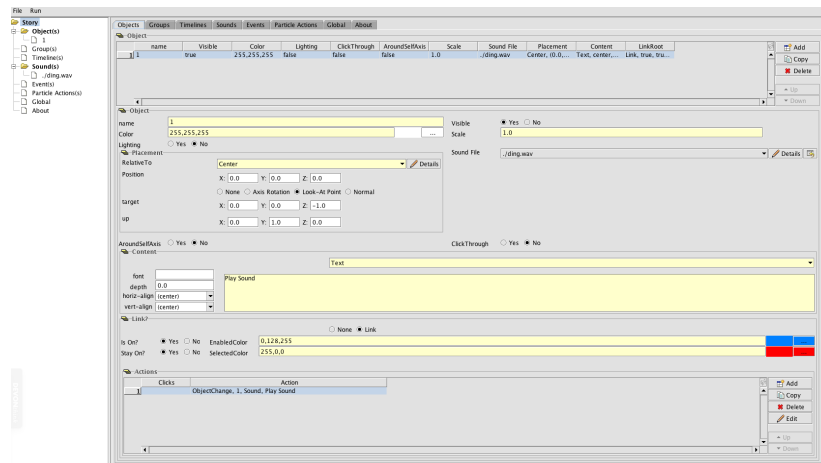
²⁹ <http://www.renpy.org/>

³⁰ <http://www.xbox.com/fr-FR/Kinect> Different API permit to use Kinect and to import embodiment interactions in personal projects.

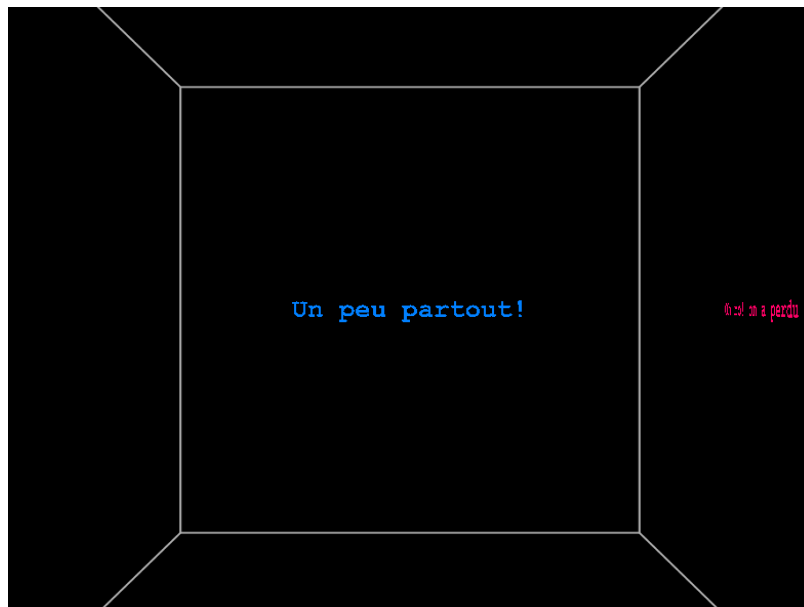
³¹ Downloadable at <https://wiki.brown.edu/confluence/display/wdm/Cave+Writing+Software+Installation>

³² An article from wired: <http://www.wired.com/culture/lifestyle/news/2003/02/57334>, documentation is available on the Brown University website: <https://wiki.brown.edu/confluence/display/wdm/Cave+Writing+Resources>

With the Cave writing editor, you can create a text which will be playable in the CAVE but if it is not possible to have access, you can simulate the result with a preview system. It can be a good way to introduce the element of 3D to students and to make them reflect on how they can use space and movements.



A screenshot of the editor



The preview of a sample

3.2 Digital Poetry, playing social, annotating... one million other ways to write with new technology

Writing with new technology can be very useful for students and fortunately there exist myriad possibilities to explore it differently. To complete my propositions, a list of some others tools to open up new perspectives.

It was in 2005 that Tim O'Reilly explains the Web 2³³ and there is the incessant daily repetition of the sociability of the web³⁴, in this context how could we forget the social networks (Facebook, Twitter, Google + just to cite three) and not think about working with them and imagining a new way of writing?

³³ O'Reilly, 2005

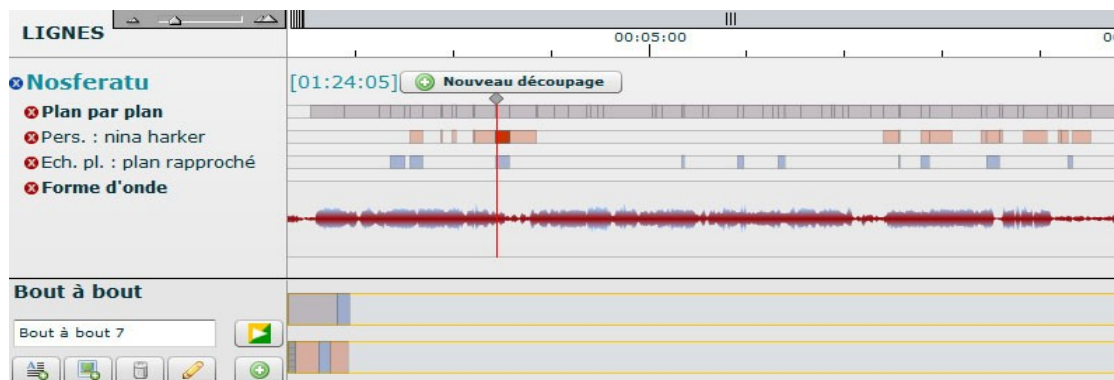
³⁴ Just some random works between so many: Chesbrough, Von Hippel...

Can the students use their social networks to create a fiction? Do they need to create a pseudonym account to produce something new? What is the point between social writing and collaborative writing (what difference when they write on a wiki and on a social network?).

This field can be very profitable to explore, especially because this could sensitize the students to the privacy rules and to better understand what and how they can show what they want to.

It is possible to “subvert” tools to produce narration or poetry, mind map softwares³⁵ can be a good help for the creation of a hypertext with another software, but it could be directly used to write in a very arborescent way.

*Flash*³⁶ is a well-known software for digital writing with which it is easy to create animated text. Annotations system like *Ligne de temps*³⁷ could be a good source of inspiration.



Students want to learn to use tools that can help them in their future professional life. Not all of them have the ambition to become technical experts, they just want to be able to accomplish their tasks without suffering too much. By giving them the desire to play with technological tools, the benefits are multiple:

- They learn how to use software
- They are initiated into the issues of new technology and can evaluate some technical artefacts
- They are sensitized towards digital writing and more globally speaking, towards the (post)digital art production

Teachers and artists need to be creative to invent new ways to use tools and to propose some new perspectives for innovation. With the digital opportunities, a new playground exists where everybody can have enough sand to build new castles.

³⁵ http://freemind.sourceforge.net/wiki/index.php/Main_Page : FreeMind is a free mind mapping software

³⁶ <http://www.adobe.com/fr/products/flashplayer.html>

³⁷ <http://www.iri.centrepompidou.fr/outils/lignes-de-temps/>

All the links have been verified the 18th June 2012

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List of E-writing:

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- [2] Jim Rosenberg: <http://www.well.com/user/jer/whatsnew.html>
- [3] Nick Montfort, *Book and Volume* http://nickm.com/if/book_and_volume.html
- [4] Dan Shiovitz, *Bad Machine* : http://collection.eliterature.org/1/works/shiovitz_bad_machine.html
- [5] Michael Joyce, *Afternoon a story* (web version) <http://www.wwnorton.com/college/english/pmaf/hypertext/aft/index.html>
- [6] Emily Short, *Bee* <http://varytale.com/read/>
- [7] Deirdrakiai: <http://www.deirdrakiai.com/theplay/>

List of programs:

- [1] Prezi <http://prezi.com/>
- [2] Inform 7: <http://inform7.com/>
- [3] Splatterlight: <http://ccxvii.net/spatterlight/>
- [4] Gargoyle: <http://ccxvii.net/gargoyle/>
- [5] Hugo: http://www.generalcoffee.com/index_noflash.php?content=hugo&accessible=true
- [6] PlayFic : <http://playfic.com/>
- [7] Many Eyes : <http://www-958.ibm.com/software/data/cognos/manyeyes/>
- [9] Tumblr : <https://www.tumblr.com/>
- [10] StorySpace : <http://www.eastgate.com/storyspace/>
- [11] Undum : <http://undum.com/>
- [12] Renpy: <http://www.renpy.org/>
- [13] Cave writing editor : <https://wiki.brown.edu/confluence/display/wdm/Cave+Writing+Software+Installation>
- [14] FreeMind : http://freemind.sourceforge.net/wiki/index.php/Main_Page
- [15] Ligne de temps: <http://www.iri.centrepompidou.fr/outils/lignes-de-temps/>
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Theory:

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