Digital Nonlinear Narrative
(The 5 Story Building)

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Introduction

Interaction technology have become more dominant since the debut of the mobile devices in the early 2000s. People have since found ways to better read and interact by the use of technology; such as all the ebooks, newspapers, magazine and blogs on their mobile devices. Mobile devices expand interaction between people and papers. However, besides all the interactions brought from technology, back to the original intention, telling narrative stories is the main purpose of books to audiences. Now, stories have been adapted to a new format but linear contents remain the same, so people are still reading the same narrative stories on a different platform. The goal of this project is to explore and experience the possibilities of the combination of mobile devices and nonlinear storytelling. Stories are originally written for formats that meant to be read or watched linearly. By adapting the content to mobile devices, some level of new interaction has developed but hasn't provide any new story-reading experience. In this project, using interaction technology to change not only the way reading stories but more importantly change story writing and storytelling itself. One story could affect another, one story could hidden from another, a simultaneous action could lead to a different story ending. Through this project, audiences encouraged to be no longer just readers, but story tellers, tell a story with various contents and endings by simple swipes.

Context

What is linear narrative experience? "Since every bit of the story is laid out across the spreads, pictures and other relevant information will rarely be presented in the best place for the storytelling experience. Readers will have to stop reading the main text to absorb the picture information, or will have to read further until they find a “safe” place to stop reading the main text and thereafter read the secondary story, etc. The
narrative is not a complete one, and representing it in a graphical way would resemble the previous representation of the bad lecture.\(^1\) And most people's reading experience are linear narrative experiences, people used to them and might not even notice there should be another way to read. Now, on most websites, sadly, the same nonlinear experience takes place. Sites present stories using a top picture and a scroll-down text column. If the story has secondary pictures and texts, these items are presented alongside the long column of text or, in the case of secondary pictures, by making the top picture a slideshow. Even on the iPad, most publishers approach tablets using a print or a web paradigm. "Three important things of non-linearity in digital storytelling. 1. It recognizes that your audience may not be interested in everything you have to say about a subject. 2. It empowers your audience to participate in the creation of the narrative surrounding your subject. 3. It allows you to create a practically-infinite number of stories with any given media collection rather than forcing you to slave over the creation of one fixed narrative that may or may not resonate with your audience."\(^2\) We need to radically change the way we tell our stories. It doesn’t make sense to keep using old paradigms on new devices. Our main goal is to learn the best way to tell a story and stop using techniques that worked only for one platform (be it text and pictures in print, video on TV or audio on radio). With digital distribution we can mix all these techniques in a way that enables our storytelling. Those of us in newsrooms also need to change the way we plan, produce and present our stories. Non-linear story is one of the most challenging formats for digital storytelling. Similar to an interactive story that allows the reader to choose

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their own path through the text, non-linear stories are presented as non sequential experiences. Readers can uncover mysteries, reveal characters, and follow plot lines in a way that is organic to them and similar to how we experience life and memory. "With digital technologies, non-linear storytelling principles can be used within the context of a traditional story. Memories, flashback sequences, or foreshadowing glimpses into the future can be organized in such a way that the reader can choose when to read or re-read the entries."³

Research

Starting this project with the inspiration from different aspects, first is Composition and Camera movement which always play important roles in film making, the second part is nonlinear narrative stories, the third part is interactive Storytelling eBooks.

Composition and Camera movement could always vary the way telling narratives in films, the nonlinear children's books using different graphic styles to integrate characters and tell narratives is another perfect example of nonlinear narrative. Using the interactive mobile media could perfectly mingle both concepts into a new media provide people experience nonlinear narrative themselves.

Black and White: Four stories are told simultaneously, with each double-page spread divided into quadrants. The stories do not necessarily take place at the same moment in time, but it may contain single story in events or incidents. "This book engages another side of the mind. It's a story; it's a puzzle; it's a game."⁴ and 13 Rue

del Percebe: Called 13, Barnacle Street in English, 13, Rue del Percebe is a single panel comic book by Spanish author Francisco Ibáñez. The panel “takes up the whole page that represents an humorous view of a building and the people who inhabits it. Each apartment is a panel in itself, with fixed characters with defined personalities. Usually each panel is not related to the others and can be read in any order, but sometimes an event affects more than one neighbor, and read in order the comic effect is more pronounced” (Wikipedia).

Interactive Storytelling eBooks: Children’s Books: Most of the Children’s books on iPad still use the traditional fair tail stories with interaction activities or small games to entertain audiences. However, the storyline itself doesn’t change much. But there are certain interactive books creates an memorable reading experience and blur the line between books, movies, and apps. Such as: Virtual History ROMA by Arnoldo Mondadori Editore S.p.A., presents “a fantastic voyage to Ancient Rome, and The Tin Tin iPad Art Book, published by HarperCollins, The whole book becomes a treasure trove you are exploring.” For instance, you can “scrub” some of the illustrations to fade between the original comic book and the artwork for the animated movie. Every image is a separate element on the page which can be tapped and seen in full-screen. My favorite part is there are a few places, like Tin Tin’s room, that are complete 3D spaces. You can tap into those images and move the iPad around.

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https://play.google.com/store/books/details/David_MacAulay_Black_And_White?id=sdd5-duBRHwC#?t=W251bGwsMSwyLDUwMSwiYm9vay1zZGQ1LWR1QjJld0MiXQ).  

like a window into this other world. Depending where you point the iPad, using the gyroscope, it shows different parts of Tin Tin’s room, or the captain’s cabin.  

Prototyping Process

The prototyping process include two components, Technique: present parallax technique in code and interface design, Concept: establish story and characters.

Parallax in code: is a displacement or difference in the apparent position of an object viewed along two different lines of sight, and is measured by the angle or semi-angle of inclination between those two lines. (Wikipedia) So in order to present parallax technique in Xcode, the interface has to divided to several layers, and insert multiple images to each layer to cause them overlap and appear as parallax.

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moreover in this project, not only one story need to display as parallax but also five of them purposely to tell an nonlinear story. In the end of this prototype, the code contains five pages in five layers, there are more than a hundred layers inside. Taking a big advantage of iPad, using the finger swipe to navigate this app from left to right allowed users to read a traditional linear story, however there are events or incidents waiting for audience to explore by swiping up and down to continue the story and engage with other story characters to create an nonlinear story.

**Code:** Presenting the parallax technique on iPad.

> Canvas Javascript

> Xcode

Main content in code:

```javascript
layers = {
    MainPage : new Kinetic.Layer(),
    layer1 : new Kinetic.Layer(),
    layer2 : new Kinetic.Layer(),
    layer3 : new Kinetic.Layer(),
    layer4 : new Kinetic.Layer(),
    layer5 : new Kinetic.Layer(),
    controls : new Kinetic.Layer()
};

var images = [
    //layer 1
    {//floor 1
        layer : 'layer1',//imageML1_bk1
        imageSource : "images/monster/ML1_bk1.png",
        x : 1,
        y : 1536,
        width : 1024,
        height : 768
    },
];
```
**Character Design:** Deliver character design in layers.

>Photoshop

**Interface Design:**

Making an app start with map, designing wireframe, screen design, making paper prototype, functioning possible interaction code. The image below is the map of this app, it shows how the users can navigate through the app.

Although this project is still incomplete, and lots of possible features are still developing, but the direction is clear. There will certainly involve with more touch screen interactions, such as: tapping, double-tapping, pinching, shaking...etc, allow users to:

1. Create events and gather all the characters as a new story.
2. Adding more interactions on characters that audiences can manipulate with as gaming features,
3. Revealing hidden stories or elements as a bonus story or leading to a different ending.
4. Add new characters that creates a new story to keep this app fresh and offer audiences endless story.

The picture below is Luke Wroblewski's "Touch Gesture Reference Guild" which is a unique set of resources for software designers and developers working on touch-based user interfaces.  

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**Establish story:**

The following chart shows the characters of each floor in the building, their characteristics and the possible interactions with each other.

![Touch Gesture Reference Guild](http://www.lukew.com/ff/entry.asp?1071)

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<table>
<thead>
<tr>
<th></th>
<th>Character</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Robot &amp; Martian</td>
<td>Although they are roommates, they have their own secret plans to conquer Earth. Robot and Martian can be really loud, which makes really hard for Wolf to sleep. The behavior of the models confuses the perception of Robot and Martian about human beings. Sidekick’s first big solo mission is to stop Robot and Martian’s evil plans. Monster hides their weapons and lab equipment. They become suspicious of each other.</td>
</tr>
<tr>
<td>2</td>
<td>Wolf</td>
<td>He is the retired villain of many famous stories. He is cranky and lives his past glories. The models sometimes wear fur. Wolf finds out that one of them is wearing the fur of his own grandmother. Wolf is pessimistic and tries to demoralize Sidekick but he is way too cheerful. Monster messes with the electricity and water in Wolf’s apartment. This infuriates Wolf.</td>
</tr>
<tr>
<td>3</td>
<td>Models</td>
<td>Living one floor under 10 beautiful models makes Sidekick want to take a look every once in a while. Monster hides in the girls’ closet to scare them. Eventually, he falls in love with one of the models. 10 models live together, 9 of them are jealous of the shortest, less skinny, and more famous of them all. He is the teenager sidekick of a superhero. He really means good but he misbehaves sometimes.</td>
</tr>
<tr>
<td>4</td>
<td>Sidekick</td>
<td>He is the teenager sidekick of a superhero. He really means good but he misbehaves sometimes. Monster gives bad advise to Sidekick. Monster is constantly interrupting Sidekick’s superhero homework.</td>
</tr>
</tbody>
</table>
5 Monster E1 E2 E3 E4 Monster has been living in the building for generations, messing with its tenants.

Design Goals and Target Audience

However, for this project, the final goal is to launch this project as an app to app store to share with more people, although the target audiences are children, but nonlinear narrative on this new mobile media device soon will be rapidly change the way people used to read. Because audience can always read the stories in any free time and anywhere when they have their mobile device on hands. And this new platform provide audience a compelling and interesting story, also allow audiences can explores a non linear way of reading stories and affect the outcome of each story by engaging interactive function on mobile devices and provoking audience to reread the stories, in the end, audiences could become active directors or actors within the stories their own.

Conclusion

The way people tell stories in print has been mostly the same for a long time. Space constraints and graphic layout have made the narrative storytelling a broken one. With the advent of interactive mobile devices and rich new ways of shaping content, the pressure is on to rethink how we produce and present our stories.9 Looking into why the incomplete narrative experience happens may help us figure out how to prevent it

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in digital publishing. After working through this project, there are potentials existed and certainly intensifying and pushing deeper will complete the project concept more. If all concept and code merge and work well this year, there will definitely a big chance this project will extend to next year. So far, this project received a lots of positive feedback from class, indeed there are many things need to be refine, not only the story itself but also a code could present the concept perfectly, however, as an MFA thesis project, it could definitely expend audience's reading experiences and understanding as being story-readers to storytellers. As technology moving forward, this project could be one of the pioneers in twenty-first century that change the digital publisher.
Bibliography


