

Rochester Institute of Technology

A Thesis submitted to the Faculty of the College of Imaging Arts and Sciences in  
candidacy for the degree of Master of Fine Arts in Computer Graphics Design.

**EGANWO: The Graphic Novel's Escape to Digital Media**

Submitted by: Brian P. Kowalczyk

Date: October 28, 2009

School: The School of Design in The College of Arts and Sciences

## Approvals

**Chief Advisor:** Chris Jackson, Associate Professor, Computer Graphics Design

---

*Signature of Chief Advisor*

*Date*

**Associate Advisor:** Dan Deluna, Assistant Professor, Computer Graphics Design

---

*Signature of Associate Advisor*

*Date*

**Associate Advisor:** Shaun Foster, Visiting Assistant Professor, Computer Graphics Design

---

*Signature of Associate Advisor*

*Date*

**School of Design Chairperson:**

Patti Lachance, Associate Professor, School of Design

---

*Signature of Administrative Chairperson*

*Date*

**Reproduction Granted:**

I, \_\_\_\_\_, hereby grant permission to Rochester Institute of Technology to reproduce my thesis documentation in whole or part. Any reproduction will not be for commercial use or profit.

---

*Signature of Author*

*Date*

**Inclusion in the RIT Digital Media Library Electronic Thesis and Dissertation (ETD) Archive:**

I, \_\_\_\_\_, additionally grant to Rochester Institute of Technology Digital Media Library the non-exclusive license to archive and provide electronic access to my thesis in whole or in part in all forms of media in perpetuity. I understand that my work, in addition to its bibliographic record and abstract, will be available to the worldwide community of scholars and researchers through the RIT DML. I retain all other ownership rights to the copyright of the thesis. I also retain the right to use in future works (such as articles and books) all or part of this thesis. I am aware that Rochester Institute of Technology does not require registration of copyright for ETDs. I hereby certify that, if appropriate, I have obtained and attached written permission statements from owners of each third party copyrighted matter to be included in my thesis. I certify that the version I submit is the same as that approved by my committee.

---

*Signature of Author*

*Date*

## Abstract

Comics are beginning to rise in popularity today, but there is still a significant portion of society that rejects comics as an art form. The main objective of this project was to develop a product for the comic book industry with which they could tap into and benefit from a broader online audience. This project attempts to further what recent success the comic book has had in other forms of media other than that of print, such as movies, videogames, and motion graphics. Reaching out to new demographics on the World Wide Web and combining the comic book experience with an array of different types of media and technology can help make this success a possibility. Crafting a digital comic became as important as the end product itself, as close attention was paid to construction and user feedback in order to preserve comic book characteristics. By doing so this interactive user experience carries on the storytelling qualities of original comics. It garners interest in a larger target audience and elevates the comic book to a new level of digital experience, in a world where newsprint production is becoming increasingly uneconomical.

*[www.briankowalczyk.com/thesis](http://www.briankowalczyk.com/thesis)*

Comics, online comics, graphic novels, interactive, new media, motion graphics.

# Introduction

The comic, like most campfire stories, fairy tales, and ancient myths, have that fantastic ability to transport people from the world of the ordinary to the world of the extraordinary. It's this journey that so many find particularly attractive. Not only is it a means for escape, but also a strangely familiar take on the path we all travel throughout our own lives. This inner-personal connection becomes the most compelling part of the comic, whether it is in the form of a strip, book, or novel. The comic has a unique quality that communicates story with its audience in a one to one relationship between author and reader that is rarely seen in media today.

During the ideation phase of the thesis project, the choice of creating a graphic novel became a clear one. This researcher has always been a storyteller and has always enjoyed reading comics from an early age. With foundations in graphic design, naturally there is a fascination with the collaboration between the printed word and the artisan image. I have always been an illustrator of some merit, so it was my intention from the outset to combine these talents with the opportunity to learn something new. Fortunately for me there were many aspects of graphic novel design and advanced ActionScripting that I knew little to nothing about.

This thesis project takes the appealing art form of the comic book and it's narrative story structure to the new environment of the World Wide Web. The struggle here lies in not only learning how to create a graphic novel, but how we can create a graphic novel experience for a broader web-based demographic that retains that unique personal relationship between artist and audience comics have. Can this interactive user experience successfully carry on the storytelling qualities of the comic book while elevating the media to a new digital experience?

# Research

This section reviews several of the main sources of information used for research throughout this thesis project. This researcher has also included many other references whose work also supports my own.

## The Comic

### The Education of a Comics Artist

This book served as my initial starting point for the foundation of my research. Michael Dooley and Steven Heller collected interviews, essays, and the writings of industry leading professionals. It provides a thorough overview of the history of comics, starting with the comic's birth (Superman in 1938, the Golden Age), and covering up to present day, with the New Stylists and Multimedia Artists of the Modern Age (Dooley, Michael, and Steven Heller, 61). Advice and methods of practice are discussed by some of the most prominent artists/writers of our time including Art Spiegelman, Will Eisner, and Frank Miller.

One of the most interesting aspects about this book is the way in which it shows the evolution of the comic as a form of art overtime. Around the 1980's comic artists began to break away from the realistic sketching style of the past generation. Artists like Bryan Hitch were beginning to employ drawings as design elements (Dooley, Michael, and Steven Heller, 61). Multimedia artists such as Bill Seinkiewicz were letting story dictate graphic style, where loose, abstract, and sketchy lines helped tell a story rather than adhering to a commonplace system of visual guidelines (Dooley, Michael, and Steven Heller, 63).

The kind of exploration that other rebelling artists, such as Dave McKean and Alex Ross pioneered is commonplace today. The Multimedia Artists of the 1990's broke away from the confines of traditional brush and ink and began using alternative materials such as painting and photography. Similarly, with the increased affordability of

the personal computer and the popularity of the internet, digital comic art is opening up the possibilities of exploration for modern comic artists. New forms of computer software and communication are encouraging artists to push their comic creations further than ever before. Comic artist Jim Steranko has reiterated this point, stating that spoken dialogue, sound effects, music, special effects, and motion graphics fused with the image is the future of comics (Dooley, Michael, and Steven Heller, 72). The artistic discovery of the past continues today, where comic art is much more than just brush and ink. Now, more artists than ever have access to creating and publishing online than ever before, allowing for limitless creativity and a level playing field for all.

David Mack, Chipp Kid, and James Sturm are all graphic designers associated with the comic industry. Each artist has a unique approach to working that has inspired my own process. David Mack takes a collage approach to storytelling, beginning as a writer and ending as an artist. This helps him later on when he begins the collage process, where he is orchestrating the layering of panels into a rhythm to take his reader's emotions for a ride (Dooley, Michael, and Steven Heller, 89). I found this approach mirrored my own. Carefully constructing the dance of panels in my comic, I wanted to create a rhythm that took my own readers on an increasingly fast paced climb toward the climax. This was done through panel spacing, number, and use of white space. As David Mack says, I used my artwork as a "roadmap" to guide the viewer (Dooley, Michael, and Steven Heller, 89). The script I prepared helped determine that roadmap, and also helped with the intermittent barrage of dream like flashback sequences scattered throughout the story.

Just as a comic's panels can act as elements of design, a graphic designer must also use elements of design to convey the comic's message. Chipp Kid reminds us that all comics tell a story. Chipp Kid believes that graphic design should always hint at a narrative in order to get people interested (Dooley, Michael, and Steven Heller, 105). Remembering this responsibility of the graphic designer became critical during the development of the comic interface. I included elements from the story to help create an environment that made the reader want to investigate further. Panning background art was included to give the audience a sneak preview of the artwork inside, acting as

a form of cover art. The “LIMBUS” navigation on the left side of the interface was also a tool used for navigation and gathering information in the story. Keeping the design consistent throughout and sprinkling in pieces of the story to the overall design of the piece helped allude to the *EGANWO* narrative.

James Sturm supports both Chipp Kidd and Dave McKean when he states that graphic design always precedes drawing in the comic book. Creating graphic novels requires a substantial amount of preplanning (Dooley, Michael, and Steven Heller, 231). Not only do panels need to work on their own, they also need to work with the larger whole of the project. James Sturm underscores consistency throughout your title from panel to panel.

When designing my graphic novel for the web I needed to take these components of design into consideration. They helped shape the way the project worked both as an interface and as a readable book. I think that the digital graphic novel I created as a whole was successful because I kept these factors in mind throughout the design process.

## Comics and Sequential Art

Will Eisner, master and teacher on the subject of comics discusses the principles of comics in this book. The ways in which he illustrates the use of framing, space, and the translation of time into a visual medium has influenced my work greatly.

He explains that comics or sequential art becomes a language of images and symbols in the mind of the reader (Eisner, Will. *Comics and Sequential Art*, 8). I have employed this same method of repetition to spur interest and inquiry in my own audience. Throughout *EGANWO* my readership face the vastness of the Danlango Desert. The feelings of solitude and hopelessness that these images conjure up become entrenched in the mind of the reader. This compounds their own feeling of being alone, as they have begun making a personal connection with the environment even before the main character (McCloud, Scott. *Making Comics*, 167). Eisner applies these patterns of imagery in his own work to create what he calls a “visual rhythm”,

one that is familiar but varied enough to maintain interest (Eisner, Will. *Comics and Sequential Art*, 16). In a similar fashion, I sporadically give my audience a glimpse of the LIMBUS device. This object's importance will be revealed in later installments of my comic. In this early issue the audience is only occasionally exposed to it, hinting at its mysterious but surefire significance to the storyline.

One of Eisner's profound beliefs about comics is their tendency to be a medium of control (Eisner, Will. *Comics and Sequential Art*, 38). Eisner is well aware of the importance of graphic design and its impact on the comic system. He employs his own use of graphic design to help break everyday left to right reading conventions (Eisner, Will. *Comics and Sequential Art*, 10). Likewise I have tried to implement this practice as well. With the point and click interactivity of *EGANWO*, some panels and graphics appear only when an interaction has taken place (Fig 1). Lengthy prose text concerning the comic is optional, and readers can show/hide this information at will.

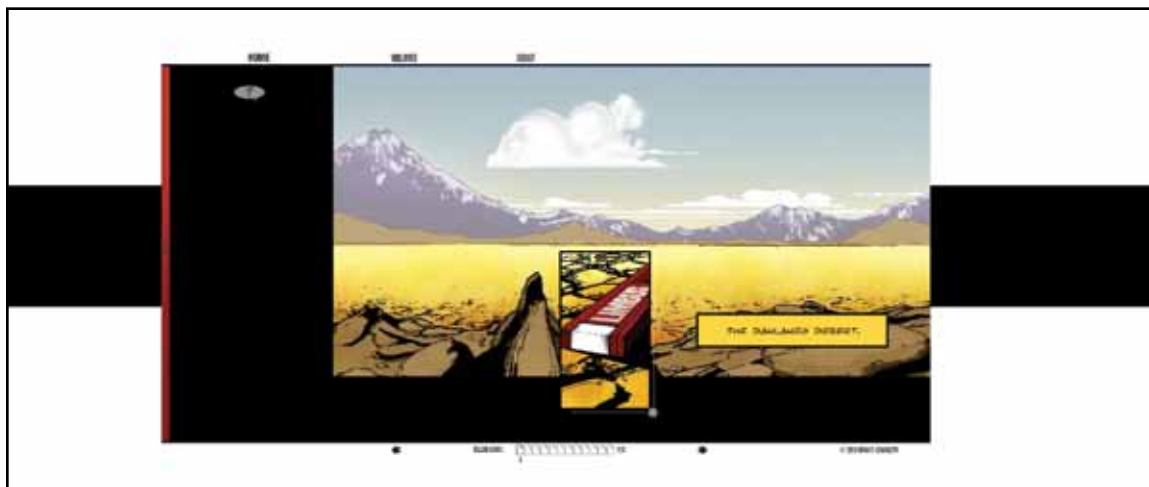


Figure 1. Example of interactivity where panel slides in based on mouse interaction, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

Nowhere is Eisner's use of graphic design principles more prevalent than in his practices concerning those of framing and timing. Eisner uses the frames within comics as digestible blocks of information that readers interpret as taking place over



a certain period of time (Eisner, Will. *Comics and Sequential Art*, 33). Using artwork as a visual representational of time has been a common practice of graphic designers, chiefly those working in the field of Time Design (Stewart, 10-3). The addition of other elements such as speech balloons, captions, and sound effects also have an impact on time (Eisner, Will. *Comics and Sequential Art*, 33). A common tool that comic artists can employ to influence timing is the way in which they manipulate the frame. In spread three of *EGANWO* I did not want my dream sequences or flashbacks to give off a feeling of lightheartedness or airy lucidity. Instead I wanted these dreams to increase in intensity and franticness. I constructed long narrow panels that I stacked tightly next to one another in a repetitive manner. Eisner notes that long and narrow panels that are clustered together typically create a crowded feeling and enhance the rising tempo of panic (Eisner, Will. *Comics and Sequential Art*, 33).

Panel creation and ideation is another area in which Eisner assisted me immensely. Before constructing panels I would try to follow his rules for panel development. Eisner suggested that you ask yourself: what elements are crucial to depicting the action in the panel? What is the reader's perspective? How much information should or shouldn't I include? What kinds of panel borders should I use? All of these questions needed to be taken into consideration before artwork was established. They were critically important as they affected the communication of ideas – the corner stone of the comic art (Eisner, Will. *Comics and Sequential Art*, 38).

## Interaction Design

### The Elements of User Experience: User Centered Design for the Web

A large portion of my responsibilities when transferring the print comic book to a web format was it's sound translation. Like the relationship between the reader and the printed book, the digital comic should have a similar type of interaction between user and interface. The digital comic's basic functions of interaction should closely mirror their real life counter parts, but should not hamper readability or functionality in doing so. The button click or scroll action to simulate the turning of a page make sense and

is intuitive, however multiple drop down tabs and pullouts can become confusing. Jesse James Garrett writes in his book about interface interaction, that the time it takes your audience to learn the conventions of interacting with your work, is a time filled with pure frustration despite how long it takes (Garrett, 117). Interface design is the design of giving your users the ability to do and interact. Within my own interface I have incorporated the mild use of metaphor. We return to the conceptual idea of using the GPS-like LIMBUS device as a navigational element. Garrett cautions designers stay away from the overuse of metaphors as they frequently obscure purpose/functionality rather than enhancing it (Garrett, 119). I use Garrett's argument effectively against him. He claims that navigation should reduce the mental effort needed to move around. I feel that my concept successfully consolidates and organizes the user's options into a readily available pop out menu.

When analyzing the structure of your interface design another valuable toolset that can be applied by the graphic designer are those of the basic design elements. Well-designed materials often jump out at us and make themselves immediately apparent. Poorly designed applications are commonly busy and leave our eyes in a constant fury of disarray. Garrett refers to this as eye movement. Most designers/corporations try to assess the movement of the consumer eye, the goal being that of a "smooth eye flow", where all avenues are displayed to him/her (Garrett, 145).

Eye flow is affected by many factors in a design including color, line, and difference. Variation or Difference can make a design exciting, however it's important for designers to find a balance between having elements that are too similar or too drastically different, as this can lead a design to quickly become stale. Garrett describes just how effective professionals can be with an element like color; designers with proficient use of color can implement difficult to use complementary colors and still pull off an effective design. Color definitely has a psychological impact on people. Color temperature can garner a wide variety of emotions in people and can also influence the movement of the eye. Traditionally the human eye has been drawn to the brightest white areas of an image. Using white and black I have made use of this color-tactic to encourage the eye to travel towards my navigation. The contrasting black and white

that I use provide an area of interest; it is this contrast between elements that will successfully lure my users into an investigation. As Garrett states contrast provides an area of focus and draw (Garrett, 146). Along with this approach I have used color in other ways to affect my audience. On the main interface I have established a thick red bar that creates the illusion of space and pushes outward (Stewart, 2-8). The advancing feeling that the warm color provides is solidified once the user begins to interact and the red bar expands (Fig 2).



Figure 2. Welcoming Interface, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

Mary Stewart notes that color can be used to highlight points of interest (Stewart, 2-14). I have used the color combination of yellow and black sparingly throughout my piece to not only continue the metaphor of the comic book caption, but to signify an onscreen interaction. By doing so I'm continuing to introduce new elements that are slight variations of the existing formula already being used in my design.

Unity and harmony help establish the formula I have described. Garrett agrees that consistency is important. Icons and elements shouldn't be designed in a bubble; they should all feel like belong to the same family (Garrett, 150). Consistently tying elements together can be done in a number of different ways, these include the use of design grids, the distribution of weight/balance, and can come down to something

as minute as typeface. Jesse James Garrett highlights the usage of a wire-frame or rough mockup. These rough sketches usually outline information critical for designers to be aware of, most notably the location of For-Placement-Only (FPO) imagery, notes on interaction, and the connectivity between site structures (Garrett, 125). Creating my own wire-frame sketches I was able to begin brainstorming the look and feel of my interface's layout. One thing I remained hesitant about when developing my foundational grid was adhering too closely or wandering too far from the grid outline. Garrett among other designers caution that designing without a grid structure can quickly cause havoc – while following too strictly can just as easily lead to a less than exciting design (Garrett, 149). Chief expert on the foundational grid, Timothy Samara agrees with this philosophy. He also comments on the idea of violation and variation; “The greatest danger in using a grid is to succumb to its regularity” (Samara, 30). My overall design has a very grid-like structure at it's core, my grid's safeness and possibility for static decline is constantly threatened through the introduction of overlaying panels and comic art.

Limiting the number of options immediately available to the user was a way for me to effectively check weight and balance. Visually weight and balance became a delicate play between the location of elements and their mass on screen. My navigation was that of Global Navigation – one where all points of access are readily available on all pages. This helped with the logical layout of my links. I tried to keep my navigation consistent typography was kept similar throughout, along with size and weight. The most important links were kept together in the same location for easy access. Weighty Links and imagery are counter balanced by other visual options such as the page indicator, copyright, and other emerging panels.

One of the most important design considerations was that of typography. Some fonts are simply easier to read online rather than in a printed format. Traditionally fonts with a serif face have been the preferred choice for the printed book, as their feet increase legibility. Garrett touches on this area as well, stating that sans-serif fonts are currently the easiest fonts to read online due to the resolution standards of modern times (Garrett, 153). I chose to stick with a very clean, condensed sans-serif typeface

in my comic. It presents itself clearly, and is no stranger to the comic world. Graphic Designer Chipp Kidd has employed the use of Akidenz Grotesk in many of the book covers he has done for Frank Miller's *Dark Knight* series. While many designers are adamantly against the use of more decorative fonts and their application to prose text, I have done so for many of the captions and writing within the pages of my comic. I decided to do this because of the comic-like nature of the project. To try and counterbalance legibility issues I logically broke my prose text up into easily digestible chunks in hopes of making the text clearer and easier to read.

## Visual Narrative

### The Visual Story: Creating The Visual Structure of Film, TV, and Digital Media

Bruce Block helps the artist sort through the differences between the written story and what the audience actually sees in film, television and digital media. Both the visual aspects of the narrative and the written story must however work together with one another in order to produce a successful product. The visual narrative is all of the imagery elements/devices used to help convey a story. This can be carried out with the help of tempo, pacing, contrast, density etc... Before these techniques can be applied storytellers must first have something to say (Eisner, Will. *Graphic Storytelling and Visual Narrative*, 5). Author Scott McCloud simplifies this principle into a need for clarity of persuasion; understanding what you are going to have to tell your audience and then figuring out how to persuade them to stay (McCloud, Scott. *Making Comics*, 10).

Visual exposition, visual conflict/climax, and visual resolution are what Bruce Block calls the three stages of the visual narrative (Block, 233). In writing, exposition is the basic information that the reader needs to get involved in the story (Block, 222). Exposition in the written form takes place alongside the execution of visual exposition, or the visual introduction of characters, personality, and situation (Block, 222).

Getting to know Will Eisner's characters is easy as he makes extensive use of exaggerated poses to help his character's "acting" mirror their speech (Eisner, Will. *Graphic Storytelling and Visual Narrative*, 57). Likewise I have also greatly exaggerated

Raven's poses towards the climax in *EGANWO* to help emphasize the tension and power of the panels - Panels themselves are literally stretched and stacked. Scott McCloud builds exposition by creating very detailed illustrations that solidify a strong sense of place in the reader's imagination (McCloud, Scott. *Making Comics*, 23). Setting illustrations found in *EGANWO* are very detailed compared to character designs. This was done in an effort to make the very deep fantasy world of Losloboss more realistic/plausible. Bruce Block suggests other ways of creating exposition popular in the television and film industry, many of which are certainly applicable to digital comics today. Title cards or crawls can help explain situations in a story. This was the preferred method of bridging the gaps in the popular *Star Wars* films of the 1970's (Block 222). Taking cues from Block on crawls and narration I made use of a more traditional practice found in comics. I introduced several captions throughout *EGANWO*, which disclosed information on setting and past events. Block highlights another technique I found useful in the montage (Block 222). In the past films such as *Rocky III* have used sights and sounds to help allude to exposition. This can also be seen in the comic world, one particular artist who frequently uses this technique is that of Osamu Tezuka. I've tried to capture this same feeling of montage/collage in my comic's dreamlike flashback sequences. Showing batches of seemingly non-sequitor imagery the audience should begin to piece together the back-story of *EGANWO*.

In *EGANWO* I have taken many of the artist's suggestions on visual exposition into consideration. I slowly introduce my characters over time allowing the reader to collect information about who they are and where they reside. The implementation of visual conflict is also taking place here. Conflict usually involves an emotional struggle that grows in intensity as the story progresses (Block, 224). The audience becomes aware of the main character's beaten and battered condition in the desert. This hints at a recent struggle that has taken place with another character/characters. This character versus character relationship is the first of three different types of conflict present in *EGANWO* (Block, 224).

Visual conflict/climax is exhibited through variation (Block, 224). In *EGANWO* I have played with the scale of objects and their visual weight in order to create contrast.

By overpowering Raven's presence in most panels with the size of the desert I have created an emotional struggle between the main character and nature (Block, 224). Alone and abandoned in such a large environment we wonder if he can escape.

The climax is the most exciting part of the story, and appropriately it serves as the conclusion for our last form of conflict (Block, 224). Here Raven faces off against his very self in a classic struggle over change. This internal struggle visually changes Raven from a weakened young man, into a strong and anger filled monster of an adult. To effectively depict this change panels become brighter and saturation is increased. The audience can watch Raven's demeanor change as his body transforms.

Finally visual resolution can begin to set in. This sensation mimics the calming sensation that the story's ending should supply (Block, 223). *EGANWO* manages to echo this feeling by reducing the number of panels onscreen dramatically. Imagery cools off with a relaxed tempo and quieter color palette.

Clearly reader control is greatly affected by visual narrative; it's a strategy for grabbing a reader's interest by showcasing beautiful settings and intricate drawings. Keeping their interest also becomes key with what Will Eisner calls Retention, or the intelligent arrangement of panels (Eisner, Will. *Graphic Storytelling and Visual Narrative*, 51).

## Writing

### The Writer's Journey

Writing has been an uncharted area for me to explore, and was probably home to some of my greatest challenges throughout this project. Christopher Vogler's study of the hero's journey was a logical starting point for my research in this area as he has collected/researched many of the best scholars whose work revolves around the origins of the story and myth. Analyzing Vogler's finding and understanding how the story is crafted became an essential part of my own research in the development of my graphic novel. Vogler admits that a new phenomenon is being crafted with interactivity that reenergizes the conventions of traditional storytelling (Vogler, xxii). Though he makes it

clear that new technology and media cannot tell an entertaining story without the basic components of the hero's journey (Vogler, xxii).

The hero's journey that Vogler speaks of is the structural elements that are used to orchestrate all myths, fairytales, and movies (Vogler, xxvii). Joseph Campbell, another scholar who has extensively studied the origin of the Greek mythology, has contributed to Vogler's compilation immensely. Campbell's findings relate the story of the myth to the "Rites of Passage", or cornerstone events/obstacles that take place in our lives such as birth, puberty, marriage, and burial (Campbell, 10). The similarity to life's challenges has lead scholars like Campbell and Vogler to conclude that all people are naturally drawn to the tale of the story because in time we all experience our own life long journey (Campbell, 12). Vogler has expanded upon Campbell's research by developing a list of structural elements all stories should try to include (Fig 3).

<b>Steps in the Hero's Journey:</b>	
<b>Writer's Journey</b>	<b>The Hero With A Thousand Faces</b>
<b>Act 1</b>	<b>Departure, Separation</b>
Ordinary World	World of Common Day
Call to Adventure	Call to Adventure
Refusal of the Call	Refusal of the Call
Meeting with the Mentor	Supernatural Aid
Crossing the 1 <sup>st</sup> Threshold	Crossing the 1 <sup>st</sup> Threshold
	Belly of the whale
<b>Act 2</b>	<b>Descent, Initiation, Penetration</b>
Tests, Allies, Enemies	Road of Trials
Approach to the Inmost Cave	Meeting with the Goddess
Supreme Ordeal	Woman as Temptress
	Atonement With the Father
	Apotheosis
Reward	The Ultimate Boon
<b>Act Three</b>	<b>Return</b>
The Road Block	Refusal of the Return
	The Magic Flight
	Rescue from Within
	Crossing the Threshold
Resurrection	Return
	Master of the two worlds
Return with Elixir	Freedom to Live
<b>The Archetypes: (Facets of the hero)</b>	
Higher Self, Shapeshifter, Threshold Guardians, Trickster, Shadow, Herald, Allies, Mentor	

Figure 3. A comparison of Christopher Vogler and Joseph Campbell's stages of the hero's journey, from Shaun Foster. *Steps in the Hero's Journey*. (Rochester, NY, 2008).



Each stage in this structure has an intrinsic role to play in the progression of the story. Vogler is careful to mention that not all stages are necessary to write a good story; he encourages the deletion and reshuffling of stages to personalize one's own work (Vogler, 19).

In the original seventy-four-page script for *EGANWO* the stages for the hero's journey were used to help craft the story. When paring the story down into a smaller form I found it useful to use the stages of the hero's journey as a litmus test. I applied these stages to the smaller sized chapters to ensure progression and prevent senseless slowdown. The first stage of the hero's journey, the ordinary world, isn't directly introduced. The reader finds himself along with Raven in the special world of the Danlango Desert. Raven quickly becomes a "fish out of water" and this point is driven home when he begins to have flashbacks of more familiar environments (Vogler, 10). The call to adventure in this section takes place when Raven can sense something unnerving taking place. The beam of light that dramatically enters from the sky represents the problem or challenge that Raven must deal with (Vogler, 10). The refusal of the call represents Raven's fear or terror of the unknown (Vogler, 11). This stage takes its course over three panels, where Raven makes a desperate attempt to flee from the energy coming from the sky. The mentor stage is where traditionally an older figure such as a teacher, relative, guardian, or Merlin like figure helps the hero face the unknown of the special world (Vogler, 12). Zeke, the nomad king plays the role of the mentor figure in *EGANWO*, though he isn't formally introduced at this stage in the comic. He can be seen giving Raven some advice about his burn tattoo. Other archetypal characters can be seen throughout *EGANWO* and this leads us to our next stage: tests, allies, and enemies. Raven is tested by the night sky throughout this issue both physically and mentally, a trickster character that resembles a giant eyeball provides previously unknown information, and several of Raven's enemies in the comic face off against him including Bufa, Renton, and a Crocodile Soldier. These trials rapidly increase along with the tension of the story as we approach the next stage, the approach to the inmost cave, or climax (Vogler, 14). The ordeal, represented here by a short and brutal battle with Renton on spread eleven of *EGANWO*, is a direct

confrontation with a hostile force (Vogler, 15). The reward stage is sometimes awarded to the hero as a treasure or weapon, in this case it is greater understanding (Vogler, 15). The reward given to Raven is his realization that he wasn't killed by Renton due to his supernatural ability of immortality. Resurrection is our last stage. It takes our hero and forces him through some sort of transformation (Vogler, 15). Raven is tested by the night sky, he knows of his special ability and why everyone wants his burn. He has become stronger because of this and is now ready to continue his quest.

### **The Idiot's Guide to Writing Graphic Novels**

The stages Christopher Vogler presented are mere guidelines to writing a good story. Writing a story takes many fundamental steps in planning and preparation before it can be written. Nat Gertler, comic author, provides a thorough overview of how one might go about constructing a graphic novel. His notes on story planning helped me to plan my own written narrative for *EGANWO*.

Gertler suggests that beginning writers start off by choosing their comic's genre (Gertler, Nat and Steve Lieber, 40). *EGANWO* is actually an amalgamation of several including, science fiction, fantasy, superhero, and adventure. The next important thing you can plan out to help you develop a successful story is your theme. A theme is what your comic is about; it is the main problem (Gertler, Nat and Steve Lieber, 44). Comics usually have multiple themes, but they are best summarized in a stripped down sentence. *EGANWO* is a story about greed and power. Raven must resist the urge to become blind with power. *EGANWO*'s secondary theme is about friendship and trust. Raven, an orphan must find a way to rely on those around him. We can see the primary theme playing out throughout the first issue.

Gertler also states that it is important for your story to have both a situation and a complication (Gertler, Nat and Steve Lieber, 46). This works on a both a large scale and a local level within the script. Currently on the local level Raven is lost and cannot figure out why he is here. On the larger scale Raven wants to live a simple, peaceful life, but obstacles and individuals he meets continue to sabotage his plans.

After these three areas have been addressed its commonplace for writers to begin brainstorming characters and settings. Christopher Vogler points out that good stories force their characters to change and grow (Vogler, 7). Having an idea of where your story will wind up will help you plan just how your characters weaknesses become strengths. Artist Mike Duggan suggests the first step to character ideation is to start by giving your character skills and traits (Duggan, 30). Contradictions in your characters personalities create interest as well. Ward Sutton comments on this when he states, "People like contradictions because we all have them" (Dooley, Michael, and Steven Heller, 196). Some popular contradictions in the past have been Dirty Harry's upholding of the law and antiauthority attitude, and Spiderman's being a superhero but having to resort to teenage angst to make money (Dooley, 196). The conflicting nature of Raven is his personal desire for peace and quiet, but his tendency to run into the wrong crowd.

When designing characters there are many different types to choose from. Raven is the reluctant antihero type with whom the audience sympathizes for because of his bad luck (Vogler, 35). While this process is taking place many comic authors suggest writing a brief paragraph about who your characters are, where they are from, what their backgrounds are, what their likes and dislikes are etc... Creating these character bios will help you keep on track while writing your story. Also always consider the impact your character's names will have on your reader's perception of your character. *EGANWO*'s hero Raven has a name that evokes solitude, loneliness, and stubborn bravery.

Once brainstorming, story, and character designs are well underway its important to maintain a reasonable scope for your project. This one area in particular I found quite difficult. Starting with a seventy-four-page document I struggled to pare my story down to a manageable twelve-page format for this project. A narrative treatment will help you manage the scope of your story. By limiting myself to a one-page summary I was able to setup parameters and guidelines that I could follow when I began physically writing the script. This is not the only benefit from writing this document. During this process I was able to make sure I included Vogler's structural elements, a variety of

character types with purpose, a definitive beginning, middle, ending, and a surefire way of testing the overarching theme of my comic. The story at this point began to resemble a dot-to-dot puzzle where if one segment was removed the story's clarity no longer made sense (McCloud, Scott. *Making Comics*, 14).

## Web Comics

### Reinventing Comics

The exposure of the comic to the Internet and the development of the web comic as an avenue of expression have only taken place recently in the last fifteen to twenty years. Author and artist Scott McCloud's own work in this area has been a pioneering effort of exceptional stand out force. In this book McCloud evaluates the comic's current transition to the World Wide Web. McCloud shares the same sentiments as many other industry professionals remarking that, "artists have only begun to consider new physical forms for sequential art" (McCloud, Scott. *Reinventing Comics*, 53).

The history of the digital comic is a short one that began in 1973 with the help of Xerox. Xerox helped develop the first Graphical User Interface or GUI, which would later be overhauled by the Apple Computer Company (McCloud, Scott. *Reinventing Comics*, 139). This new form of technology would eventually bring artists in droves to the computer to create digital art. "*Shatter*", created by Peter Gillis and Mike Saenz made the first digitally produced comic book on a Macintosh Computer in 1985 (McCloud, Scott. *Reinventing Comics*, 140). Early comics like those of *Batman: Digital Justice* and *T.H.E. Fox* consisted of raw imagery files, were time consuming, and expensive (Duggan, 10). It wasn't until a newer generation of artist came along, that the computer really started being treated as a place for exploration (McCloud, Scott. *Reinventing Comics*, 144). Other early online comics slowly increased in number as the popularity of the web increased over the years. These comics included "*Where The Buffalo Roam*" of 1991, "*Netboy*" of 1993, and "*Doctor Fun*" of 1993 (Duggan, 10).

The main draw behind web comics is the limitless possibilities that web publishing can provide. As Internet connection speeds continue to increase web comics will most

certainly become more accessible. Digital delivery systems in coming years will come in the form of online services provided by company intranets or internal networks (McCloud, Scott. *Reinventing Comics*, 164). Of course advantages granted from the provision of these services are not limited to large companies alone. There are many advantages for both companies and individual entrepreneurs publishing straight to the web. The first and foremost advantage of web publishing is that the Internet is accessible to millions of people (Gertler, Nat and Steve Lieber, 273). While few comics online have seen much in the way of revenue, there are no worries about printing costs or publishing fees (Gertler, Nat and Steve Lieber, 273).

One common misconception people have about moving the comic industry to an online format is that companies who begin publishing web comics won't be able to compete with the hundreds of independents already out there. On the contrary, companies will find that they still have the upper hand with advertising online (McCloud, Scott. *Reinventing Comics*, 190). The introduction of the comic as a plausible online industry will only serve to level the playing field for all creative types.

By publishing comics online artists and authors become a part of an online community. These communities aren't necessarily profitable but they are furthering the exploration of the comic art form much like the Multimedia Artists did in the 1980's. This new group of artists are small in number but are restricted by zero rules (McCloud, Scott. *Reinventing Comics*, 165). Probably the most exciting draw of the web comic is the exclusive communication that takes place between reader and independent creator (Withrow, Steven and Alexander Danner, 16).

Web comics have introduced new opportunities and new obstacles yet to be overcome (McCloud, Scott. *Making Comics*, 36). The number of obstacles facing comics on the web is many. Web comics require artists to do a lot more than the jobs traditionally associated with comic books (Duggan, 11). Authors become pencilers, inkers, colorists, letterers, and web hosts. *EGANWO* required me to also undertake the role of graphic designer, GUI designer, and coder. Placing comics online takes a lot work from all areas and backgrounds. Having to be a jack-of-all-trades, often artists find that they cannot excel in all areas and sometimes become dissatisfied with their lack of

proficiency in a certain skill (Withrow, Steven and Alexander Danner, 17). Placing works online becomes a major responsibility for the creator, as they are expected to maintain their sites regularly with updates (Duggan, 11). Creators also risk creating unclear, inconsistent, and unsuccessful work when they do not collaborate with others (Withrow, Steven and Alexander Danner, 17).

Another problem facing the web comic is the public's general reluctance to purchase a product they cannot tangibly own (McCloud, Scott. *Reinventing Comics*, 174). Comics have done well in the past because purchasers owned a copy that they could physically hold and touch, rather than simply having access to material through an online service that can be read or merely seen. Internet companies who charge for similar services are helping to rapidly change these rules concerning online business practices. Some of the factors affecting web comic's acceptance we do have control over. Scott McCloud explains that not all problems stem from a lack of bandwidth. Factors such as load times, content quality, payment hassles, and steep prices all keep customers away (McCloud, Scott. *Reinventing Comics*, 177).

The Internet has spurred new artistic techniques and methods for collaboration and distribution (Withrow, Steven and Alexander Danner, 15). Clearly though there is a lot of room left for innovation in design and marketability. Scott McCloud, among others, is proposing possible solutions to some of the problems threatening web comics, including the implementation of a micropayment system. For now Donations and online subscriptions to some of the larger comic companies such, as Marvel Digital Comics Unlimited will endure.

## Process

This section details the process by which I went about creating the *EGANWO* graphic novel. Incorporated is my reasoning behind my design choices, and possible solutions to some of the problems online web comics are facing today.

Beginning the physical process of building my graphic novel, *EGANWO*, would take research in multiple areas of study. When I first started off I took a three tiered

approach, focusing on the following areas of research: the collection of inspirational materials and research of the current state of the online comic industry, character design and its process, and comic book script writing. It was necessary for me to try and tackle all three of these topics simultaneously as my time for working on this project was initially limited to two years.

## Analyzing the State of Web Comics

My assessment of the web comic status quo revealed some interesting findings that would later help shape the outcome of *EGANWO*. Most sites that charged for web comics were large companies such as Marvel and required subscriptions. Others made use of donation systems, while others still were free of charge. Many websites on the World Wide Web served as a sort of hub, where multiple artists are trying to get their work out to web communities. These communities are centered on the comic fan-base. Websites like those of Blank Label Comics, Keenspot, and Komikwerks are just a few examples. These sites get a good number of hits daily because of the quantity of comics they supply for free. Unfortunately the artwork found at these sites often gets lost in a menagerie of advertisements and blogs. Arguably there are some HTML based web comics like *Sam & Lilah* by Jim Dougan, whose easy navigation makes exploring his large format images a pleasure. Dougan employs an easy to use point and click interface that other comics simply overlook ("*Sam & Lilah*").

An astonishing universal trend found reoccurring in even some of the more successful and well-designed web comics was the lack thereof an immersive environment. Even Scott McCloud who managed to explore the world of interaction and get his audiences to explore web comics in new ways often drags the user out of the experience with lack luster website designs that have little or no relation to the comic being viewed ("*The Right Number Part One*"). *Nowhere Girl*, a comic which has excellent presentation, is devoid of any kind of real visual feedback ("*Nowhere Girl: Online Comics*"). While this might be the intent of the artist, aesthetics should never overshadow content accessibility. Often readers are left without a title to refer to or

an idea of where they are. Comics like Demian 5's "*When I Am King*", begin to think about this concept of an immersive environment but still feel severely limited by its dependence on HTML Frames ("*When I am King*").

Significant strides have been made by some of the larger companies online. Marvel comics have produced a subsidiary company called Marvel Digital Comics Unlimited that specializes in bringing old classics to the Internet ("*Marvel Digital Comics Unlimited*"). Lucas Arts and *StarWars.com* have also produced several comics that can be viewed in a comic viewer ("*Clonewars Comic*"). Both companies are giving users much more control over their online reading experiences. These add options, but like most of the newer motion comics lack any kind of interaction with the user ("*Batman The Dark Knight Motion Comic Premiere Ep 1*"). These newer forms of web comics tend to become something entirely different.

Making myself aware of these problems I began to rectify them in *EGANWO*. During the construction process I made certain that the actual website/application that the comic would be viewed through echoed my own comic instead of providing it with just a cold dead space to live in. It was also important that *EGANWO* find its own space to live in on the web because using free hosting would only limit and clutter the page with the addition of advertising, ultimately detracting from the user experience.

Inspired by Graphics Smash and *Nowhere Girl's* use of cover art in their comics, I created panning splash art that would entice my audience to open my comic and read onward ("*Graphic Smash*"). Giving the user more control was another critical feature I wanted to include. Not only should our readers be able to tell where they are, they should be able to shift through pages at will, as if they are holding the book in their hands. This stems back to our research on good interaction design. Good interaction design makes the right course of action the easiest to take (Garrett, 120).

I decided that some reader interaction was necessary to include, furthering the feeling of reader immersion. This kind of interaction has been done before with sound, movement, and limited animation in web comics such as "*The Makeshift Miracle*" and "*The Magic Inkwell*" (Withrow, Steven and Alexander Danner, 158). I decided to combine these simple types of animation with the more cinematic form of animation



that impressed me in motion comics. This hybrid, comprised of Flash Video (FLV) and Flash animation, was a new area of exploration in web comics. It provided some user feedback that gave the audience a feeling of progression without displaying complex animations that would begin to take away from the reading experience.

Probably one of the most important factors I learned from researching existing comic art was the importance of keeping navigation simple. Simple HTML based web comics like those found on [www.act\\_i\\_vate.com](http://www.act_i_vate.com) are successful because they keep navigation relatively invisible and reading flow uninterrupted.

## Character Design

Acting as writer I created Character Sheets, or brief biographies and descriptions of each character (Withrow, Steven and Alexander Danner, 39). I then began researching visuals as to how my characters might look. Tom Bancroft's book on "Creating Characters with Personality" helped me throughout this process. Everyone from writer to illustrator on the comic team should try and submit visual suggestions from fashion magazines, hairstyle catalogues, and other forms of popular media in an effort to build a database of resource material for reference (Bancroft, 84). Factors such as purpose, personality, background, and overall description should shape the visual characteristics of your characters (Bancroft, 16).

Having this information, I analyzed a character like Raven, who is meant to be a determined and strong willed boy that's mature in nature but somewhat inexperienced with life's challenges. I then applied a whole host of different visual cue's to echo these traits; Raven at the beginning of our story has a lean body that's lacking in strength and support. Raven's square upper body and strong jaw line however provide a sense of underlying resilience and durability. The appearance of durability is key to Raven's impression of strong will. This is also represented by his rugged and somewhat ratty appearance. Raven's eyes are hidden from others around him in an effort to exude a feeling of distance and introversion. Ayem, another character in the series, can be seen as a free spirited and enthusiastic young man. This is expressed through his youthful

and grungy appearance. His childlike tendency towards trouble, wild and free-roaming hair, and limber disposition all imply boundless and untamable energy.

At the time of my character creation process my script for *EGANWO* was well underway. As I read through the script for *EGANWO* I took notes on what each character did, was going to do, and what props he/she interacted with throughout the novel (Gertler, Nat and Steve Lieber, 116). This gave me some ideas to combine with my reference material and I began exploring some very quick/rough thumbnail sketches. These sketches focused on skeletal structure at first and slowly evolved into shape and proportion (Fig 5).



Figure 5. Structural sketches for Raven's body structure, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

Details were excluded until these underlying factors were set in stone; Steven Lieber refers to this as "Body Building" (Gertler, Nat and Steve Lieber, 109).

As I narrowed my character traits down to successful sketches I began to combine these into a much more finished character, One where finer details like hair and facial features could be factored in. This finished concept was then transferred to a Model Sheet, "A drawing or set of drawings of a character, prop, or setting used as reference

to help keep a consistent look (Gertler, Nat and Steve Lieber, 113). In my Model Sheets I wanted to show a couple of different views for each character such as the profile, front, back, and three quarter view – this is sometimes referred to as a Turnaround (Withrow, Steven and Alexander Danner, 39). Having multiple views of my characters would help keep my characters consistent throughout the comic. On a team of illustrators Model Sheets and Expression Sheets are a great way for artists to learn how each character should be Drawn (Gertler, Nat and Steve Lieber 113) (Fig 6 and Fig 7).

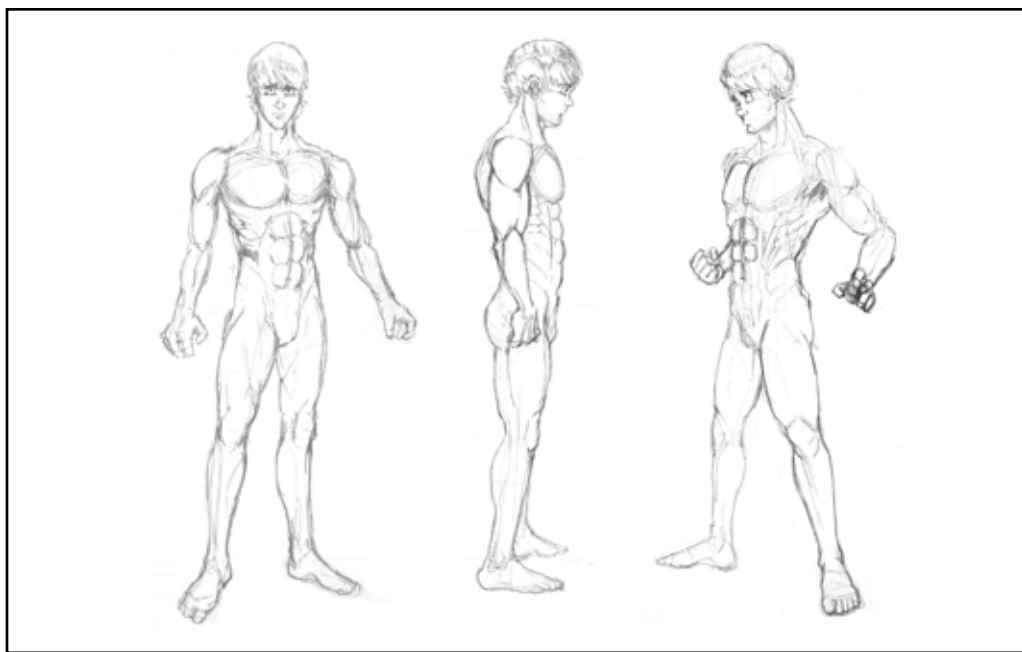


Figure 6. Raven's character model sheet, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

Unfortunately during my early research I didn't come across any literature describing the necessity of the Character Lineup. This Character Lineup was a technique I needed to retroactively add. Some Model Sheets were inconsistently drawn and the Character Lineup would serve not only as a concrete example of how each character looked, but also as a guide of comparison for contrasting my characters against one another. Bancroft warns that when creating a cast of characters, they shouldn't be too similar in size or appearance (Bancroft, 132). This is very different from including similar design

elements into the aesthetic quality of each character's drawing. Bancroft talks of clothing, physical description, and body structure. Remembering that variance creates interest and combining Bancroft's thoughts on creating a cast of characters I was able to develop a diverse cast of characters that worked well with one another within my Character Lineup.

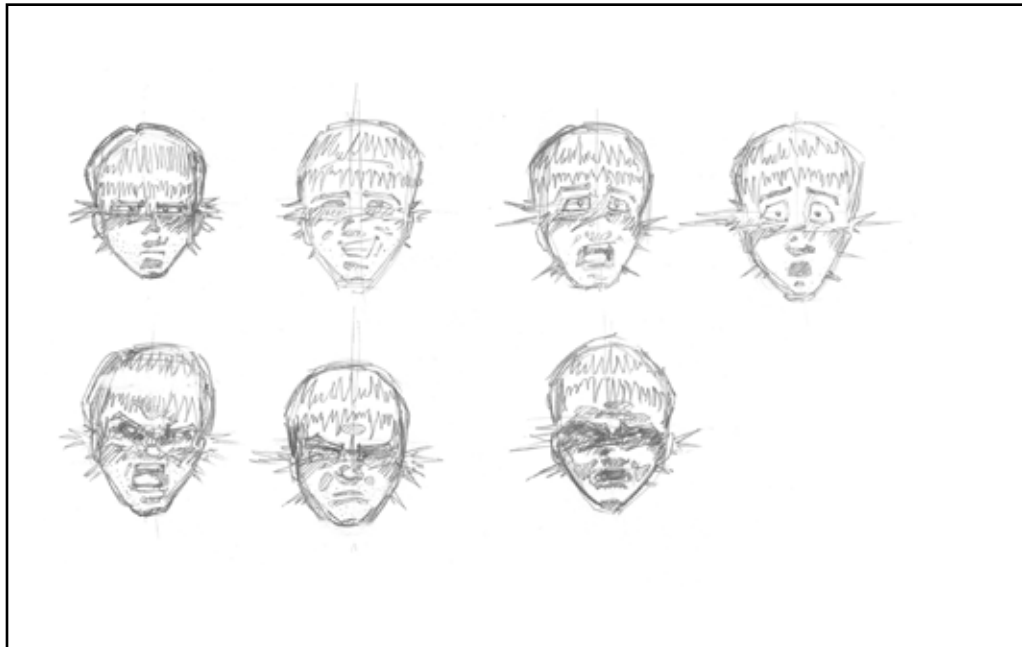


Figure 7. Raven's expression sheet, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

Withrow and Alexander are correct in their assumption that character designs cannot exist inside a vacuum (Withrow, Steven and Alexander Danner, 11). Many illustrators and authors suggest gaining inspiration from the works of professionals that truly excite you. *EGANWO* was greatly influenced in artistic style and narrative prowess by Akira Toriyama's *Dragonball* series. Using a heavier pencil and forging the inking process, I provided a much rougher visual style to *EGANWO*. This was a design decision based on time and one that managed to improve the visual quality of my comic. Like Toriyama's characters I chose to make mine have a dynamic design rather than a static design. Dynamically designed characters are those that slowly change overtime (Withrow, Steven and Alexander Danner, 31). Original appearances

begin to shift as the story progresses and serves to heighten the realism of the characters involved.

## The Script

The research I conducted on script writing was confusing at best. Unlike film and television there is very little in the way of a standardized set of rules when it comes to script writing for the comic book. Graphic novel scripts differ from screenplays in that they are like personal letters written between writer and artist (Gertler, Nat and Steve Lieber, 71). Usually there are three different categories in which comic scripts can fall into.

The “Full Script” is a play-by-play guide that describes each panel to be illustrated in detail – similar to a television show/movie script (Duggan, 71). The second common form of script is the “Layout” or “Drawn Script” (Gertler, Nat and Steve Lieber, 71). This type of script is popular with writers who are also illustrators themselves. The third type of script is called the “Marvel Method”; it’s usually used for shorter comics rather than graphic novels and can range from just a few paragraphs to several pages in length (Dooley, Michael, and Steven Heller, 187).

Having discovered the “Layout Script” later on in my research, I opted for the more detailed “Full Script” for *EGANWO*. I approached writing my script the same way a beginning artist might approach a gesture drawing exercise. I began writing a freeform story with little concern over direction or duration. As I progressed through my first draft I did keep in mind the goals and themes of the story. I knew that Raven needed to reach certain plateaus in the story in order to effectively make use of Vogler’s Structural Elements. This line of attack wasn’t the best one I could have chosen. Ultimately I needed to write and revise four additional drafts, beginning with seventy-two and ending with thirty-two.

After gathering feedback on my script it became apparent that my story was far too long. Most comic book issues range from fifteen to eighteen pages, but *EGANWO* was long enough to split into several issues. I determined that taking the most exciting

section of the first book, isolating it, and making it work, as the first issue was the best course of action to take. Part of the reason why I was able to split *EGANWO*'s first book into several issues was in part due to the writing style I attempted to recreate from such great writers as Isaac Asimov and William Gibson. Both frequently juggle characters and settings so often that the reader rarely has time to get bored.

One concern raised with this solution was the lack of a definitive beginning, middle, and ending to the story. This was compounded by the dreamlike nature of this first issue, where Raven continually flashback and forth between a dreamlike state and the present world. To address this concern I proceeded to revise the script yet again and review the effectiveness of the plot. I combed over and rewrote the script in detail, making certain that the story included several forms of exposition, conflict, and resolution. Along with Block's structural elements I felt it was necessary to include with every panel notes on Moment, Frame, Image, Word, and Flow (McCloud, Scott. *Making Comics*, 9). Moment involved my personal decision to incorporate or withhold certain images based on time. Frame involved decisions concerning distance, perspective, and image cropping. Notes on the Image required choices to be made about size and quality. Choices focusing on Word determined how much additional information should be revealed. Flow showed how images were connected and related. While this version of the script would also prove to be entirely too long at nineteen pages, it did provide invaluable information later on during the final script writing and panel planning stages (Fig 9).

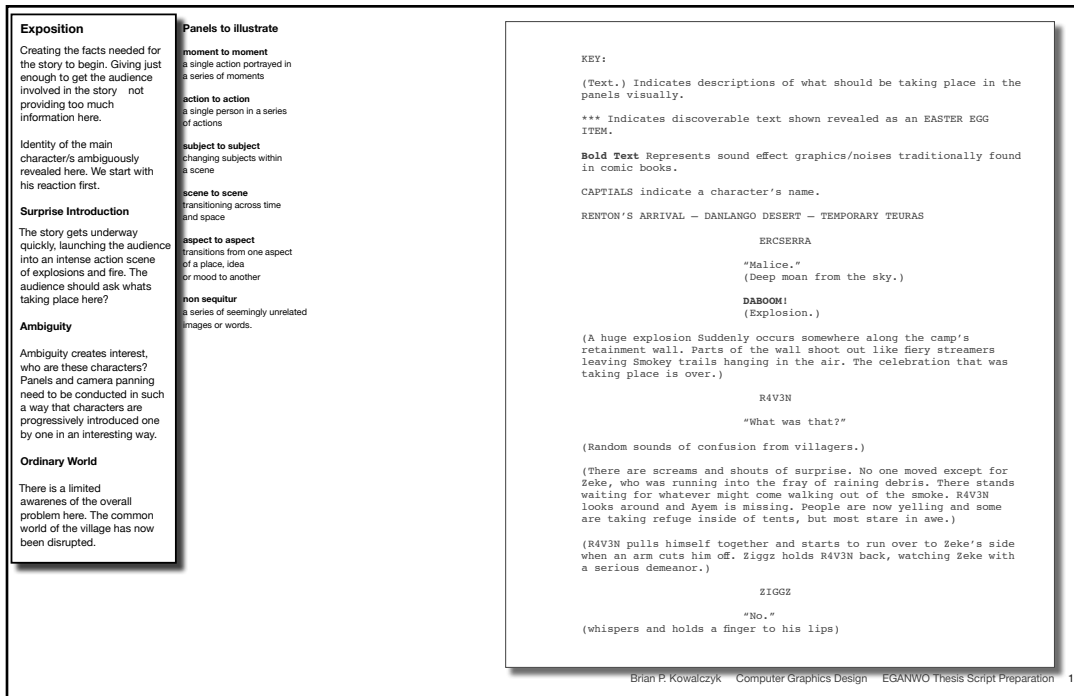


Figure 9. Section of the detailed script, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

Prior to the writing of the final script, committee members suggested the writing of the treatment or narrative summary (Fig 11). This one page long document would serve two purposes, to finally solidify the narrative, and shorten its length to a manageable size. Mindful of all of my previous documents, I was able to streamline this procedure rather quickly. I trimmed my script down to twelve pages and converted it into a much clearer and concise format that I discovered in Nat Gertler's *"The Complete Idiot's Guide to Creating a Graphic Novel"*. Having used this treatment approach sooner I probably could have saved myself an enormous amount of time (Fig 10).

**PAGE ONE**

(1)

ESTABLISHING SHOT: outside, afternoon. The sun is high in the sky, the landscape is of a wide open and lonely desert, creating a sense of vulnerability. There is a gentle wind that is beginning to slowly pick up in intensity as clouds begin to roll in.

SFX: Wind Blows.  
1 CAPTION: The Danlango Desert

(2)

FULL FIGURE: R4V3N lies face down in the dirt. There is some debris and signs of a struggle.

(3)

CLOSE UP: focus on R4V3N's head and shoulders, we can visibly see the EGANWO tattoo. A few feet away from him lays a LIMBUS Device that appears to be non-functional.

(4)

EXTREME CLOSE UP: R4V3N's face is dirty and beaten. After a moment R4V3N's eye shoots open.

(5)

LONG SHOT: The wide desert expanse, and R4V3N's small silhouette can be seen lying on the ground.

(6)

INSERT: R4V3N's hand reaches and grabs at the ground for strength.

2 R4V3N: This pain... is excruciating.

(7)

MEDIUM SHOT: Low Angle, R4V3N tries to get up with a painful expression. Then falls on his face in exhaustion.

3 R4V3N: How did it happen?

(8)

EXTREME CLOSE UP: R4V3N's mouth and blood shoots out onto the ground.

SFX: Coughing.

Figure 10. Section of the final script, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).



Brian P. Kowalczyk  
Thesis Narrative Treatment

## EGANWO

R4V3N wakes up in the desert unsure of where he is or how he got there. Beside R4V3N is a LIMBUS device. Looking at the sun triggers a very quick flashback, where he is running with his companion Ayem in a hurry. R4V3N can remember this, and he smiles with the thought of his friend.

Suddenly R4V3N notices how beaten and battered his body is, and the strange force that seems to be holding him there. Just then the sky begins to transform into the maw of some fantastic beast as a large beam of energy is launched downward in his direction. R4V3N struggles to evade the beam but he is hit squarely in the back and thrown into another flash back as he writhes in pain.

R4V3N can see the broad, threatening landscape of a barren wasteland before him. Blocking his path is a barbed wire fence unlike anything we are accustomed to. After a brief warning about the world, R4V3N's flashback is over.

R4V3N finds himself back in the light of the energy where a loud drumming hum permeates the air around him. R4V3N rises up into the sky slowly. The LIMBUS device that was next his body blinks to life with numbers. As R4V3N floats into the sky he remembers more...

R4V3N's memory starts to become more sporadic, a little quicker, with brief glimpses of the past events leading up to the present. R4V3N recalls three strange men stepping off of their ModaBikes, in the desert. The Crocodile Solider asks if this is who they are looking for. R4V3N shouts to Ayem that they have gone beyond the boundaries of Danlango.

Meanwhile R4V3N begins to feel immense power entering his body and rejuvenating his cells. As his body strengthens, paranoia begins to set in, and R4V3N begins to look around the desert wildly. R4V3N flashes back again. A strange creature named Def mentions the markings on his skin. A stalker stands and points ominously. R4V3N's memory flashes with images of himself colliding with Bufa, in a one on one fight. This is followed by a memory of Zeke, R4V3N's mentor explaining what the EGAWNO are and why the men were interested in it.

R4V3N is now fully engulfed in white light, his strength is unbelievable, and his euphoria has turned into hatred for those who were after him earlier. R4V3N flashes memories of him thinking the people around him know more than what they are telling. R4V3N executes the crocodile solider. R4V3N recalls a large explosion. Ziggz mentions that they must conceal R4V3N's identity. Then R4V3N remembers Renton, the source of evil who put him where he is. Renton mentions how the boys will be brought to him.

That's when the white light fades, and R4V3N falls to the cold, now nighttime, desert floor. He laughs sporadically in the darkness. After a few moments Renton reappears walking. Zeke mumbles something in astonishment. Ziggz holds the body of a fallen comrade. Quickly Renton backhands R4V3N with a sledgehammer, he mentions that there is no such thing as immortality.

Figure 11. Section of the narrative treatment, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

## Panel Planning

The final script had been established and I was ready to begin planning my page layouts, thumbnails and mockup. In order to expedite my planning of the panels I really needed to grasp how comics worked. For this information I looked to Scott McCloud's *Understanding Comics* where he defines the way in which a comic works as juxtaposed pictorial imagery of deliberate sequence (McCloud, Scott. *Understanding Comics*, 9). In other words, the reader reads each panel as a momentary snapshot of time, and then bridges the gap between panels creating a sense of motion in the mind. This arrangement of pictures must always help the reader bridge this gap of action or space between panels with their own experiences (Eisner, Will. *Comics and Sequential Art*, 38). The true pleasure of reader interaction with the comic originated here, but could not exist without narrative flow.

Narrative flow provides for a smooth transition between panels and continues the story throughout the pages of the comic. When constructing narrative flow, it needs to be broken down into a series of sequences helping the artist during his process of development and the reader to digest content (Eisner, Will. *Comics and Sequential Art*, 38). Nat Gertler calls this step the "Breakdown", artists go through the script and break each page into a plausible page layout sequence (Gertler, Nat and Steve Lieber, 69). This stage, also sometimes referred to as pacing, was the process I used to separate and orchestrate the rhythm and tone of *EGANWO*. The biggest challenge I had when conducting this procedure was creating successful page layouts that still managed to include the necessary key points in my story. While the script was in its final form and provided detailed analysis of what panels were to be illustrated, it was during this phase that the story was still editable and could easily be changed.

Having a sound understanding of the purpose of the panel as an element of design was crucial to the success of *EGANWO*. Eisner referred to the panel as a medium of control that guided the wandering eye (Eisner, Will. *Comics and Sequential Art*, 38). Comic Theorist Thierry Groensteen agreed with Eisner on this matter. Her analysis of the functions of the frame would aid me in my implementation of rhythm and repetition

and their parallel to narrative flow. Using Adobe Illustrator I created tabloid sized canvases for laying out not only digital panels, but also entire spreads for comparison (Fig 12).

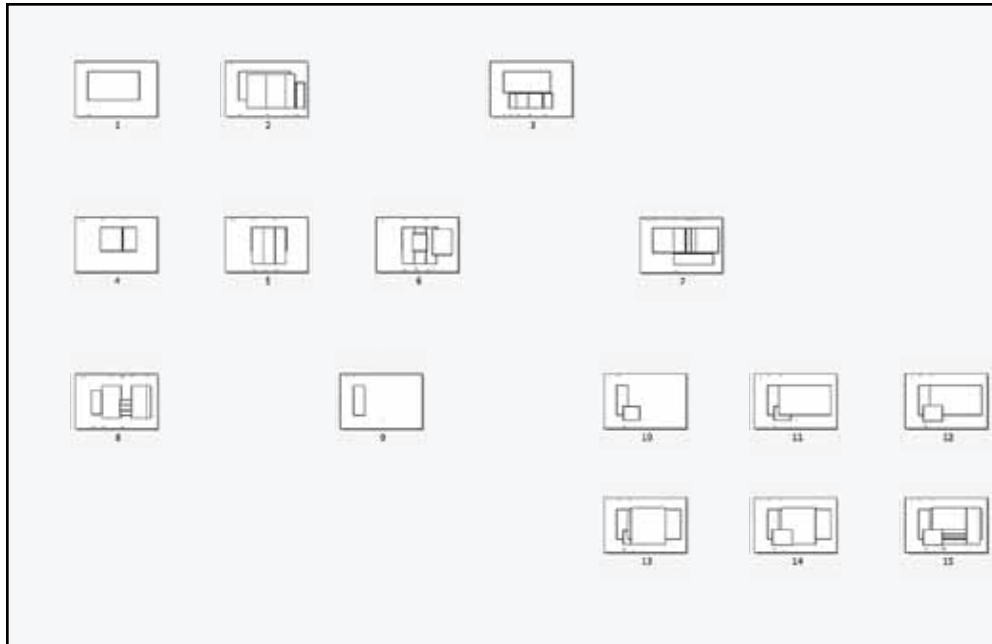


Figure 12. Spread Map, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

My plan used Groensteen's functions to layout blank numbered panels that I would later use for final artwork. Groensteen describes the functions of the frame as belonging to one of several categories: Closure, Separative, Rhythmic, Structural, Expressive, and Readerly (Groensteen, 36). *EGANWO* uses the Closure function of the frame throughout, most artwork is contained in some sort of supportive frame and rarely breaks free or becomes borderless. The Rhythmic Function is also interjected in several places giving a sense of beat, timing or tempo with imagery. Frames occurring in flashback sequences also make use of the Expressive Function – supplying a shape shifting and hazy form implying instability. I also intended *EGANWO*'s rampant usage of the Separative Function where images are read individually. This last function is put to use in the flashback sequences of *EGANWO* where Non-Sequitur images appear beside one another, but have little connection.

The shot-list I included in the script was critical for the artist's job of seeing just how a panel or scene should be drawn. Marcie Begleiter's *"From Image to Word"* was instrumental in outlining all of the different camera shots used in the script writing industry. I used a few that actually carry over to the comic world including the "Insert", or close-up shot revealing secondary information missed in original coverage (see Spread One, Panel 2) (Begleiter, 59). And the use of the "High-Hat Shot" and "straight on", or angled up view point from the floor sometimes referred to as the "Worms-Eye-View Shot" (See Spread Six, Panel 1) (Begleiter, 59). These camera angles worked hand in hand with Scott McCloud's notes on panel transitions.

By deciding on the type of panel transition to use artists and writers can get a better idea of how artwork inside a panel is going to be drawn. These transitions are Moment-to-Moment, Action-to-Action, Subject-to-Subject, Scene-to-Scene, Aspect-to-Aspect, and the Non-Sequitor (McCloud, Scott. *Making Comics*, 15). Please note that not all comics use all of these techniques. Some creators may only use one type of transition in some of the more experimental comics. *EGANWO* does make use of the Moment-to-Moment transitions, which depict a moment in time that occurs over the length of several panels showing the same action. This can be seen when Raven falls from the sky over a series of panels in spread ten. Action-to-Action transitions show one subject going through a series of different actions. An example of this can be seen on spread seven where Raven becomes empowered with strength by a strange force. Camera focus frequently shifts at this stage in the comic. Viewpoint rapidly changes from extreme close-ups, to full body shots, and back to close-ups again in an effort to enhance the paranoid feeling Raven is feeling. The Aspect-to-Aspect transition is put to use often in *EGANWO*, it can be found in several places where camera angle seems to capture the same setting from multiple viewpoints displaying the passage of time. The Splash panel at the beginning of *EGANWO* and the panels following it on spread one are a good example of this. Last but not least comes the Non-Sequitor Transition, where flashback sequences provide seemingly unrelated images that contain valuable back-story information on the supernatural world of *EGANWO*.

Illustrating the panels was not as simple as drawing on paper. I had a responsibility to be aware of what elements in the frame were primary to the action taking place in the panel (Eisner, Will. *Comics and Sequential Art*, 39). I needed to ask myself: from what perspective were my viewers seeing these actions and how many visual elements should I include (Eisner, Will. *Comics and Sequential Art*, 39)? Panel layout and actual drawn imagery play a significant role in the amount of visual information they can interpret and comprehend. Even panel borders can sometimes help represent the past, present, or thought (Eisner, Will. *Comics and Sequential Art*, 44). A large part of page layout comes down to overall composition; the arrangement of elements on a page. In this case, the arrangement of panels on screen had to be composed horizontally in order to adhere to the horizontal presentation solution I came up with. This made creating vertical layouts difficult to execute. Instead I relied on overlapping panels, negative space, and contrasting size relationships between panels. Steve Lieber reinforces this strategy when he points out that avoiding symmetry, making use of odd numbers, providing contrast/variation, and exploiting awkward tension in visual elements can communicate ideas, lead the eye, and be aesthetically pleasing (Gertler, Nat and Steve Lieber, 143).

Once my thumbnails were finished and my rough sketches for my dummy were transferred to a working size I was ready to refine my artwork into a finished form. A dummy is a lot like a mock up in the design world, after working with a dummy a comic artist has the idea of structure needed to follow through on the final piece (Eisner, Will. *Comics and Sequential Art*, 131).



Figure 14. The transition from thumbnail, to rough, to final illustration, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

Using my dummy for certain images in my final comic I managed to blow up the half size illustrations and use them for tracing (Fig 14). This method for tracing/correcting older images saves a great deal of time (Gertler, Nat and Steve Lieber, 129). Normally, these “pencils” (finished pencil versions of final artwork), are inked, but in the interest of time and aesthetics I chose to stick with the rough pencil form for my comic’s final rendered outlines.

## Interface Design

The interface design involved figuring out how users were going to come into contact with the functionalities of the comic (Garrett, 115). In my initial thumbnails and preliminary sketches for the *EGANWO* interface I began designing both the look and the functions that would be available. A lot of these concepts eventually changed from their original form or in some circumstances carried over from previous ideas.

There were two concept sketches for the original interface, one consisted of a black outer frame that enclosed and supported the main interface, and the second interface had a letterbox appearance where artwork could bleed off the edges of the screen (Fig 15).

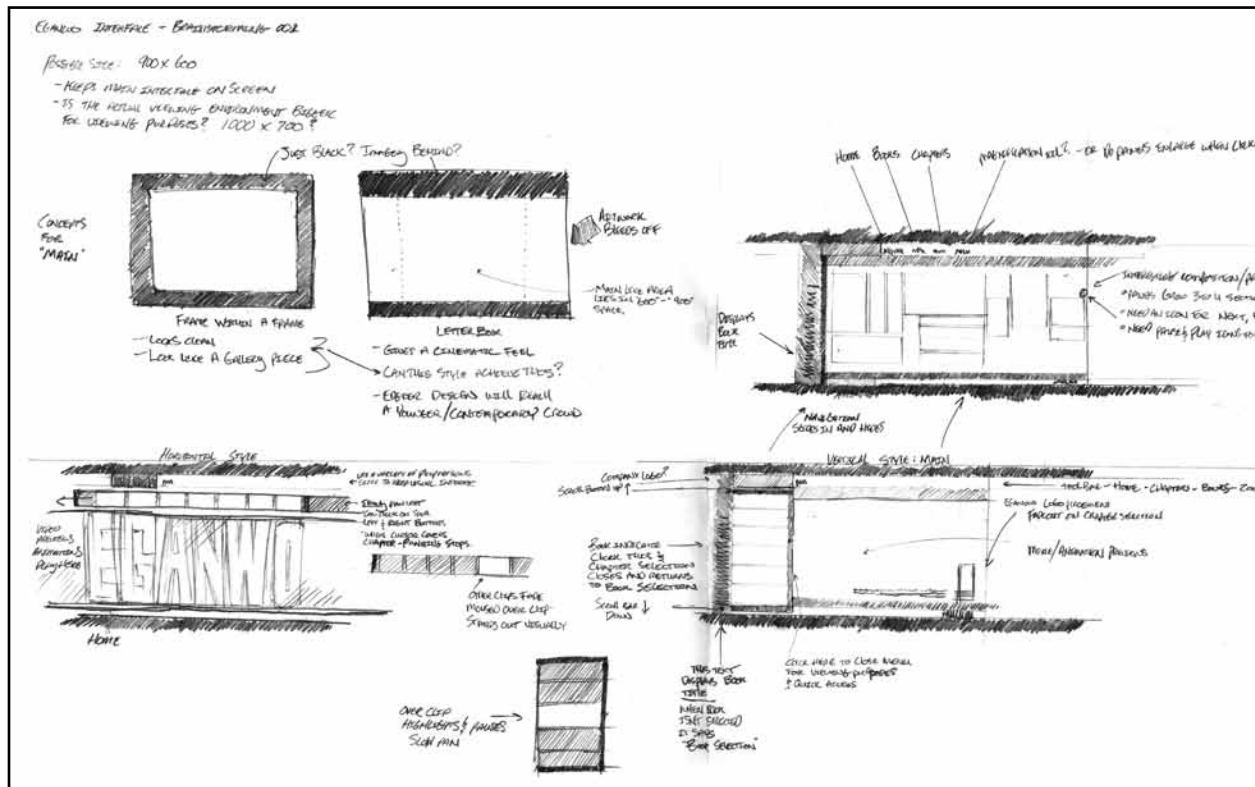


Figure 15. Rough interface sketches, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

The latter of the two was selected because of the cinematic quality of the parallel black bars. While the original interface was clean and mimicked a gallery display piece, it was a little too constrictive. The letterbox design had a style that could achieve the same clean presentational feel while supplying an edgier design that would resonate with a younger and more contemporary crowd. The size for the comic was set at 1000 x 700 pixels – slightly larger than the standard for today. The artwork’s living space would amount to 600 x 900 pixels and looked best on a larger monitor. This was deemed an acceptable design decision because most new monitors today are of HD quality and a larger size - standard fare in reputable firms and design studios where this piece might be exhibited.

Continuing with the letterbox interface, the plan for the main navigation, spread control, and extra options for comic viewing were placed along the top portion of the interface. Spread selection was reduced to a scrolling or panning selection

menu. When an issue was highlighted the panning bar would momentarily pause in anticipation of a selection. While this strategy did isolate the navigation and keep users from having to travel with their cursors, this option was avoided because of its tendency to create visual distraction. Movement at the top of the interface would take the reader's attention away from the comic. If snippets of comic art were also introduced into this strip readers would more than likely try to decipher these smaller images. Instead I developed another approach to the letterbox navigation, where main navigational links such as Home, Volumes, and About were grouped together. Separately, spread control was placed in another area located at the bottom-center of the interface. The spread control, which was only available during comic viewing, was simplified into a series of Next, Back, and page indication icons that the reader could click on at any point in the comic. The page indicator told the reader what page he/she was on and an idea of their overall progression through the comic. Book and volume selection became even easier, when a user clicked on Volumes it launched a pop-out menu that allowed the user to select from a list of *EGANWO* books and issues, from there they could then view the comic. This strategy acted as a metaphor, as the menu represented an object of navigation in the comic. What it also provided me with was a way to organize and hide unnecessary onscreen clutter.

Having too many links and options for the audience to choose from can be distracting. This was another reason for why many of the extra options I wanted to include were necessarily dropped. The original interface planned to give readers the ability to turn sound on/off, zoom in and out of artwork, move freely in the comic space, and provide extra information on the world of *EGANWO* (Fig 16).



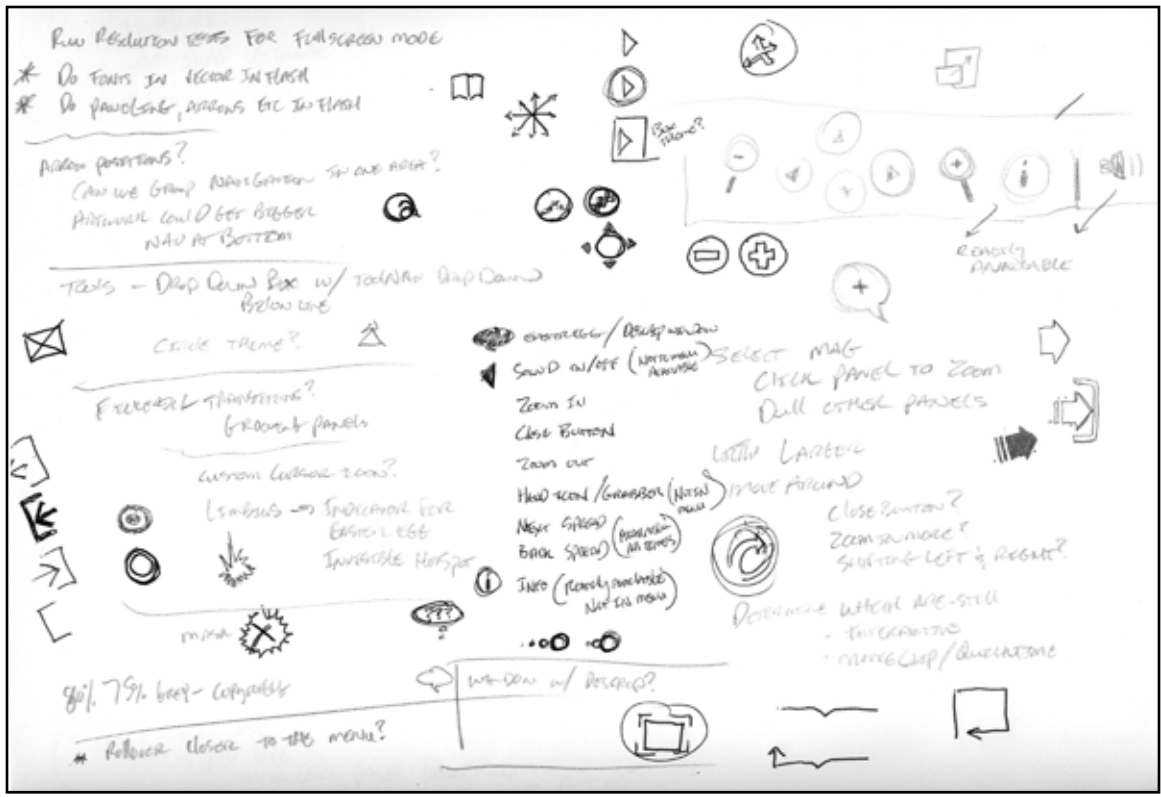


Figure 16. Notes on icons and ideas, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

In the final interface sound was omitted because of its habit to exponentially increase the file size of externally loaded content. The options for zooming in and out of artwork was dropped in favor of enlarging and reducing image size via tweens depending on the location of the cursor. The ability for users to use the hand tool or grabber to move around freely in the environment was also dropped because artwork needed to be restricted to the 600 x 900 dimensions. The information button providing details on subject matter and story was initially left out, but later reintroduced due to public demand. People felt that the inclusion of some supporting text describing the story would help readers better understand what was going on. Other options such as the “Full Screen” option were foregone due to sheer technical requirements placed upon the designer in such a limited amount of time. Allowing the audience to play and pause pages upon pages of FLV files would again alienate the reader and take he/she out of the immersive environment we were trying to create.

A large portion of this entire project was file management. Each part of the comic had its own designated folder system, from published Flash SWF (Small Web Format) files that were loaded externally to the panel artwork's PSD files that needed housing with all their original artwork files. Buttons and icons for the interface needed to be organized as well. These Icons were designed in Adobe Illustrator as vector artwork so that they could be scaled down and still retain most of their clarity. Each icon was related to comic books in some way, they needed to look as if they all belonged to the same family, and they each had to accurately represent the functions for which they were being used. An arrow in motion was used to indicate the Next/Back buttons for spread control, a thought bubble was used for flashback sequences, and a speech bubble was used for readable portions of text giving background information on the story.

The largest challenges involved with the interface design were providing the user with an indication of where they were inside of the menu system. I managed to employ my own unique use of breadcrumbs for this. Breadcrumbs are an easy way to show Users what previous links they have clicked on. In the *EGANWO* interface I managed to execute this by having the title on the LIMBUS navigation system transition to Books, Issues, and Issue 1 when the user made a selection. These animations had to be prepared before hand and inserted into the ActionScript code to play properly. For a while I struggled with this problem trying simple text indicators that were a little to reminiscent of what a user might see on a regular website.

## Coding Challenges

Some of the greatest challenges that I faced in this project came in the form of ActionScript 3.0. My goal was to use AS3 to help take the ideas I had about functionality and actually implement them. When I went about creating my application I knew that I wanted the majority of my code kept external. I decided this would be a good thing to learn as most interactive firms keep their code external because it makes for fast updates and organized file structures. By creating an external document class

I can easily update my code without having to launch the actual program. Another added benefit to externalizing SWFs instead of housing them inside of one document is the ability to significantly break up file sizes into manageable sizes for acceptable downloads.

My first coding challenge came in the form of a question: how do I load external SWF files into other existing SWF files? Traditionally designers will create a shell, or master SWF file, that the other SWFs are then loaded into via a loader. This was the basic premise behind my spread control and its functions. The audience would click and jump from page to page in the comic, loading in different SWF files each time.

The primary goal behind this project was to create an application that an organization could easily update. With this factor in mind I wanted to build the application to be expandable at all times. The code needed to be built in a way that could allow for expansion if an individual wanted to add or subtract several pages. This way any edits to the interface would be minimal. The code then was designed to be elastic rather than hard-coded. The solution to this method was to instill an array-based system that had loaded into it all of the file names of the externally loaded content for easy access (fig 1.1). The array referred to as mySpreads held all of the names of the external files and worked in conjunction with the loader system that was developed. The loader system was a simple set of functions that periodically called on the array and its accompanying variable whichSpread. Variable whichSpread kept track of what spread in the comic was currently loaded for viewing. When the loader function was called, a URLRequest would be issued, referencing the array and the variable whichSpread. The loader would then load the corresponding file. In order for the external SWF to be properly positioned on the stage, the loader object containing the SWF needed to be loaded into a container object on the stage (Fig 17).

```

package com
{
    import flash.events.*;
    import flash.net.navigateToURL;
    import flash.net.URLRequest;
    import flash.net.URLLoader;
    import flash.events.*;
    import flash.net.*;
    import com.lib.transitions.Tween;
    import flash.utils.Timer;
    import flash.media.Sound;
    import flash.media.SoundChannel;
    import flash.media.SoundTransform;

    public class DocumentClass extends MovieClip
    {
        // ***** CUSTOM PROPERTIES *****

        private var myTimeline:Timeline;
        private var fileName:String;
        private var mySpread:Array; // @todo: to declare, but needs a value
        private var mySpreadIndex:int = 0;
        private var myLoader:URLLoader;
        public var myLoader:URLLoader;
        private var mySound:Sound;
        private var mySoundChannel:SoundChannel;

        // ***** CONSTRUCTOR *****
        public function DocumentClass()
        {
            fileName = "";
            mySpread = ["spread1.txt", "spread2.txt", "spread3.txt", "spread4.txt", "spread5.txt", "spread6.txt", "spread7.txt", "spread8.txt", "spread9.txt", "spread10.txt"];
            mySpreadIndex = 0;
        }
    }
}

```

Figure 17. Code for the array mySpreads, from Brian P. Kowalczyk. EGANWO. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

When constructing these spread control functions, certain other conditions needed to be factored in such as the loading of the first initial spread. It's structure was slightly different because we wanted the application to remember the user's progress in the comic in case they explored the main navigation. Certain limits of control needed to be implemented as well to prevent users from going too far back or forward as they clicked (causing them to run out of pages). This was managed by a series of if/else statements that monitored the user's progress through the length of the array.

Menu navigation also provided a dilemma. Users needed to be able to access a multi-tiered navigation bar that shifted between options when a selection was made. This menu system consisted of many Tween animations that are triggered based upon the conditions connected to a series of complex event listeners. These listeners listened for Boolean variables; user selections changed them to true or false.

In the beginning of this project the Tween class was used to execute the code driven animations of the navigation menu. Unfortunately I learned that the Tween class should be reserved for simpler types of code based animation, as it frequently misfires, fails to execute, or provides a jagged animated result when complexity is added. In it's stead, the third party class Tweener is much more suitable for animations running with complex call functions. Following this discovery the application needed to be refurbished with the appropriate code (Fig 18).

```

// [PENDING] [COMING] *****
function loadMovieClipPreload()
// load the next image
// have to give the loader the url location of the image, make a URL Request
var urlRequest = new URLRequest(myPreload[comicPreload]); //Tweener and FLV need for the url
myLoader.loadClip(urlRequest);
Container.addChild(myLoader);
comicPreload = 0;
comicPreload++;
}

function loadPreload()
// load the next image
// have to give the loader the url location of the image, make a URL Request
var urlRequest = new URLRequest(myPreload[comicPreload]); //Tweener and FLV need for the url
myLoader.loadClip(urlRequest); // loading through our loader object
Container.addChild(myLoader);
}

function onComplete() {
trace("onComplete");
}

function loadPreload(event:Event) {
mc = MovieClip(myLoader.content);
if (comicPreload == myPreload.length - 1) {
trace("you've finished the url.");
} else if (comicPreload == 0 || comicPreload == myPreload.length) {
if (Container.numChildren > 0) {
trace("onComplete");
trace("Container.removeChild(myLoader);");
//mc = null;
mc.loadMovie();
mc.removeEventListener(Event.CLICK);
}
// load the next image
// have to give the loader the url location of the image, make a URL Request
comicPreload++;
if (comicPreload == myPreload.length) {
trace("you want the url.");
} else if (comicPreload == 0 || comicPreload == myPreload.length) {
var urlRequest = new URLRequest(myPreload[comicPreload]); //Tweener and FLV need for the url
myLoader.loadClip(urlRequest); // loading through our loader object
Container.addChild(myLoader);
}
}
}

```

Figure 18. The loader code for the comic, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

Another nice property of the Tween class is its easy to update nature. Once I defined general Tween Object Templates I could easily reference these animations for any object on the stage. This made updating or changing these animations relatively painless.

Another situation that arose with my menu navigation was that there were many users who were having significant trouble accessing the menu. Users were frequently lost and couldn't figure out where to click. Once users managed to rollover the menu they needed to click one too many times to access information. To counter this problem committee members and I decided it would logically make sense for the menu navigation to open right after the user made their "Books" selection to avoid confusion. This eliminated the multi-click problem and the lack of early direction given to the user.

The decision to use externally loaded FLV files was made for several reasons. Originally I intended to include some limited FLV animations, but I also planned on incorporating a great deal of high quality still imagery as well. When I began creating

the graphic novel in this fashion I noticed a persistent problem with flickering rollover states on some of the still imagery I was trying to interact with. Later I would come to find out that this was caused by a relatively simple mistake concerning the use of BTN, or button objects, where a more flexible movie clip object would have been more appropriate. FLV files were not without their problems either. Learning how to effectively use the component editor was critical to being able to update video files. Working with the FLV loader was a learning experience in and of itself. The FLV loader code's structure differed slightly from the traditional loader script in AS3. Professor Chris Jackson's book "*Flash + After Effects*" was instrumental in helping figure out the FLV section of my code, and applying the enlarging/reducing of panel imagery (Fig 19).

```
// ----- TWEEPER ELEMENTS TO PASTE -----  
var coverThumbnail:Object = {x:93, y:15, time:1, transition:"easeInQuart"};  
var coverThumbnail:Object = {x:159.5, time:1, transition:"easeInQuart"};  
  
var menuHomeLink:Object = {x:127.5, time:2, transition:"easeInQuart"};  
var menuHomePage:Object = {x:33.5, time:2, transition:"easeInQuart"};  
var menuBookList:Object = {x:229.5, time:2, transition:"easeInQuart"};  
var menuBookList:Object = {x:493.5, time:2, transition:"easeInQuart"};  
  
var menuImageComp:Object = {x:408, time:1, transition:"easeInQuart"};  
var menuImageComp:Object = {x:478, time:1, transition:"easeInQuart"};  
var menuImageComp:Object = {x:177, time:1, transition:"easeInQuart"};  
var menuImageComp:Object = {x:185.5, time:1, transition:"easeInQuart"};  
var menuImageComp:Object = {x:348, time:1, transition:"easeInQuart"};  
var menuImageComp:Object = {x:178, time:1, transition:"easeInQuart"};  
  
var gradientSlideLeft:Object = {x:214.5, time:1, transition:"easeInQuad"};  
var gradientSlideRight:Object = {x:270.5, time:1, transition:"easeInQuad", onComplete:gradientSlide};  
  
var menuProgressFill:Object = {x:89, time:2, transition:"easeInQuart"};  
var menuProgressFill:Object = {x:233.5, time:2, transition:"easeInQuart"};  
  
var menuOpen:Boolean = false;  
var menuOpen:Boolean = false;  
var menuClose:Boolean = false;  
var coverImageLoad:Boolean = false;  
var gradientReady:Boolean = false;  
var menuReady:Boolean = false;
```

Figure 19. Tweener code for the menu navigation, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

Jackson's book also covered area on video compression, which helped me to prepare my FLV files for download on the web. Jackson lists the ideal data rate for higher-quality video content on the web as range between 350-400 kbs (Jackson, 263). I also chose to export my video as a On2 VP6 (compression codec for Flash Video) file in order to achieve the best quality possible even though it only runs well on most newer machines (Jackson, 268). The appearance of the FLV files changed slightly overtime. As I began bringing in more and more video files I felt that the progress bars

present were a little too visually overwhelming. Instead, I opted for a “Please Wait” caption box that allowed FLV files to load off screen, and then Tween in when ready for viewing.

A problem that occurred during the export of these FLV files was that of file size. Using Adobe After Effects, I tried to export and compress these videos down in size. The compression these videos underwent simply wasn’t enough. Most of the videos were averaging at 900 kbs or more. I discovered that the premier video compression utility on the market was Sorenson Squeeze. Using this application I was able to reduce FLV size dramatically. One such video jumped from 892 kbs to 172 kbs. Combining Chris Jackson’s suggestions with the professional compression tools of Sorenson Squeeze I was able to create some very smooth looking videos that looked great at actual size. One hang up related to this process that nearly prevented me from using Sorenson Squeeze was the Meta-Data loss that occurred when the FLV underwent compression. Sorenson Squeeze being third party software did not recognize the nested cue points exported out of Adobe After Effects. These cue points were critical to firing the animations in my comic. Luckily after reading about Sorenson Squeeze I found there was a way to rebuild these cue points in Sorenson Squeeze.

Getting back to code-related challenges, one problem that was consistently causing trouble, was the slow down of system memory. Originally I thought this problem was related to bandwidth limitations, as the user clicked through the comic additional variables would be added to Flash Player’s system memory. This would eventually slow down the application and even cause it to crash. Visiting some online scripting forums I was able to find a solution. The application required a “cleaner” function, a function whose responsibility was to locate and eliminate unneeded variables. This function would be called on every time the user switched from page to page in the graphic novel (Fig 20).

```

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846
847
848
849
850
851
852
853
854
855
856
857
858
859
860
861
862
863
864
865
866
867
868
869
870
871
872
873
874
875
876
877
878
879
880
881
882
883
884
885
886
887
888
889
890
891
892
893
894
895
896
897
898
899
900
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
921
922
923
924
925
926
927
928
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952
953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
974
975
976
977
978
979
980
981
982
983
984
985
986
987
988
989
990
991
992
993
994
995
996
997
998
999
1000

```

Figure 20. The FLV loader code, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

One unmet challenge of the thesis project was that of the “Next Spread” prompt/button. This button had to be changed to a “Click Next...” graphic that prompted users to move on to the next spread in the comic. The goal of this tab was originally to act as a button. Unfortunately because of the way the application was constructed, being made up of half external and half timeline-based code, it was impossible to access information inside of the external SWF files. The correct solution to solve this problem would be to rebuild the entire application as an entirely external or timeline-based application.

## Focus Group

During the final weeks of the thesis project I conducted two separate focus groups with students who matched the age specifications of my target market. I distributed a survey questionnaire, which I asked them to fill out after they had read through the beta version of my thesis project (Fig 21). The reaction I received from this study was extremely beneficial to my project. I was surprised to find that only sixty-eight percent of the students tested felt the online comic successfully captured the feel and function of a graphic novel. Luckily these subjects provided me with many suggestions on how I could improve the piece.

Some students pointed out that the overall experience of the comic was a little overwhelming. At times they had too many names and places being thrown at them.



## **EGANWO: The Graphic Novel's Escape to Digital Media**

### **SURVEY**

Are you familiar with comic books?   Y   N   (if yes, please provided more information)

Rating EGANWO, how well do you think it has captured the way a comic book functions/feels?  
(Not at all) 1 2 3 4 5 6 7 8 9 10 (Perfectly)

Does it add anything to the experience?

Did the visual appearance of the application create an immersive experience?

Briefly describe what took place in this issue of EGANWO to a friend.

Please provide any comments/suggestions/critiques about the interface/comic here.

Figure 21. Example of the survey administered, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

Others found the business of clicking tiresome, and preferred comics that scrolled instead. One of the most common problems to arise was that students often felt lost in the navigation of the comic pages. Students were unsure of when they had seen everything that a spread had had to offer before moving onward. Back and Next arrow buttons didn't have any kind of text to tell people what their functions were. These problems lead subjects to focus on how to navigate rather than on the comic's narrative.

Subjects provided a variety of different solutions to combat the problems they were experiencing. More than one pointed to NBC's online comic for the program *Heroes*, which supplied a navigation that was similar to my own, but commanded a much larger and clearer presence ("Heroes Novels"). Their bold navigation inspired me to enlarge and label my own spread controls. A few students also mentioned that an easy way to help make the interface a little more user-friendly would be to employ a tutorial or help menu. This menu, which I later incorporated into my design, would provide users with an animation detailing how to interact with panels, navigate through the pages of the comic, and a description telling the user how a "continue" message would prompt them to move onward when they had seen all the panels in a spread.

Fixing the "Next Spread" button/prompt would have also helped solve the confusion that the user was experiencing. Unfortunately this was one challenge I was not effectively able to solve. In its place I chose to change the prompt from "Next Spread" to "continue". I also removed the prompt's button state and blinking arrow icon in hopes of dissolving any notion of a button.

For the most part feedback was positive. Many found the animations, interactions, and graphics engaging. Some likened the experience to that of watching a movie. Subjects felt like they had a bigger role to play in the comic experience, and thought it seemed like life was actually being added to the actions of the comic. Some students also found the visual design of the site immersive and compelling. Many even countered the opinions of others stating that the subtle use of animation and interaction kept these special effects from overpowering the comic experience.

Overall the feedback from this study was very useful as it showed me several different ways that I could improve upon my existing design. Although the number who understood/misunderstood the story was very close, this did not surprise me considering the very complex and experimental storyline of the first issue. From a navigation standpoint the results of the story were a little disconcerting, but understandably so considering the problems presented by the communication between SWF files. From an art and design point of view this study can be seen as a success. Most found the artwork and innovative motion of the site interesting enough to progress through the comic. Clearly though the fixes students suggested were necessary to the success of this piece. In the real world few visitors would struggle with a difficult navigation.

## Conclusion

The problem I set out to solve was, can newer forms of digital media become an effective tool to help the printed comic evolve and become a viable commodity in the digital marketplace? In solving this problem my goals were to create an online graphic novel that demonstrated the possibilities of this concept, and to create a digital work of art that replicated the close one-on-one personal experiences that are often associated with the comic book. Obviously, there are many things I have learned that will change the way I create my comics in the future. One of my major problems in this project was my split between external coding and timeline-based code. In the future I will need to work universally on the timeline or in document classes. My personal artwork has grown a great deal from this experience, I'm finding myself interested in how full blown motion comics are created and designed. I plan on exploring motion comics in greater detail for my next set of comics.

Overall I think I was successful in showing the companies can transition comics into a web based product, as long as they are careful about preserving the comic book's original integrity. One important way that these companies can effectively recreate the comic experience is to create an immersive and interactive environment for the comic,

rather than placing comic art in a bland void of space for viewing. Unfortunately there is still a great hesitation on the part of many in the industry to treat the web as a viable and professional medium. Sequential art scholar David Wolk discusses the misuse of Internet potential when he muses "And despite early predictions that online cartoonists would change the format of their work along with it's medium, not a lot of cartoonists have made particularly clever use of the infinite canvas..." (Wolk, 366). From my own research people in the field can see that the potential for successful online comics is there, but I among other artists have only begun to scratch the surface of exploration.

## Bibliography

Bancroft, Tom. *Creating Characters with Personality*. New York, NY: Watson-Guptill P, 2006.

"*Batman The Dark Knight Motion Comic Premiere Ep 1*". YouTube. <http://www.youtube.com/watch?v=A5omulw6qiA> (accessed Oct. 30, 2009).

Begleiter, Marcie. *From Word to Image*. Studio City CA: Michael Wiese P, 2001.

Block, Bruce. *The Visual Story: Creating the Visual Structure of Film, TV, and Digital Media*. Burlington MA: Focal P, 2008.

Campbell, Joseph. *The Hero with a Thousand Faces*. Hammersmith London: Fontana P, 1993.

Dooley, Michael, and Steven Heller, eds. *The Education of a Comics Artist: Visual Narrative in Cartoons, Graphic Novels, and Beyond*. New York NY: Allworth P, 2005.

Duggan, Michael. *Web Comics for Teens*. Boston MA: Cengage Learning, 2008.

Garrett, Jesse James. *The Elements of User Experience: User Centered Design for the Web*. Berkeley CA: New Riders, 2003.

Gertler, Nat and Steve Lieber. *The Complete Idiot's Guide to Creating a Graphic Novel*. New York NY: Alpha Books, 2004.

"*Clonewars Comic*". StarWars.com. <http://www.starwars.com/clonewars/comic/> (accessed Oct. 30, 2009).

"*Graphic Smash: Action Webcomics*". Graphic Smash. <http://www.graphicmash.com/> (accessed Oct. 30, 2009).

Groensteen, Thierry. *The System of Comics. MS: University Press of Mississippi, 2007.*

"*Heroes Novels*". <http://www.nbc.com/heroes/novels/> (accessed Oct. 30, 2009).

Eisner, Will. *Graphic Storytelling and Visual Narrative*. Tamarac FL: Poorhouse P 1996.

Eisner, Will. *Comics and Sequential Art*. Tamarac FL: Poorhouse Press 1985.

Jackson, Chris. *Flash + After Effects*. Burlington MA: Focal P, 2008.

"*Marvel Digital Comics Unlimited*". <http://marvel.com/digitalcomics/> (accessed Oct. 30, 2009).

McCloud, Scott. *Making Comics: Storytelling Secrets of Comics, Manga and Graphic Novels*. New York NY: HarperCollins, 2006.

McCloud, Scott. *Reinventing Comics: How Imagination and Technology Are Revolutionizing An Art Form*. New York NY: HarperCollins, 2000.

McCloud, Scott. *Understanding Comics: The Invisible Art*. New York NY: HarperCollins, 1993.

"*Nowhere Girl: Online Comics*". [www.nowheregirl.com](http://www.nowheregirl.com) (accessed Oct. 30, 2009).

"*Sam & Lilah*". Act\_i\_vate. <http://www.act-i-vate.com/42.comic> (accessed Oct. 30, 2009).

Samara, Timothy. *Making and Breaking the Grid: A Graphic Design Layout Workshop*. Gloucester MA: Rockport, 2002.

Stewart, Mary. *Launching the Imagination: A Comprehensive Guide to Basic Design*. New York NY: McGraw-Hill, 2002.

"*The Right Number Part One*". Scottmcccloud.com. <http://scottmcccloud.com/1-webcomics/trn/index.html> (accessed Oct. 30, 2009).

Vogler, Christopher. *The Writer's Journey: Mythic Structure for Writers*. Studio City CA: Michael Wiese P, 2007.

"*When I am King*". [www.demian5.com/king/wiak.htm](http://www.demian5.com/king/wiak.htm) (accessed Oct. 30, 2009).

Withrow, Steven and Alexander Danner. *Character Design for Graphic Novels*. Burlington MA: Focal P, 2007.

Wolk, Douglas. *Reading Comics: How Graphic Novels Work and What They Mean*. Philadelphia PA: Da Capo P, 2007.

## Appendix

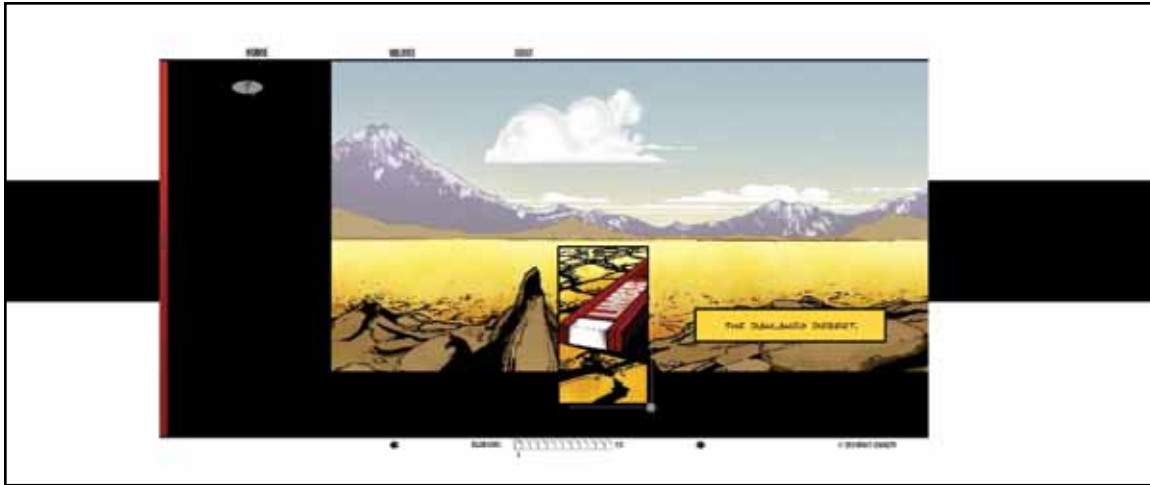


Figure 1. Example of interactivity where panel slides in based on mouse interaction, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).



Figure 2. Welcoming Interface, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

### Steps in the Hero's Journey:

Writer's Journey	The Hero With A Thousand Faces
<b>Act 1</b>	<b>Departure, Separation</b>
Ordinary World	World of Common Day
Call to Adventure	Call to Adventure
Refusal of the Call	Refusal of the Call
Meeting with the Mentor	Supernatural Aid
Crossing the 1 <sup>st</sup> Threshold	Crossing the 1 <sup>st</sup> Threshold
	Belly of the whale
<b>Act 2</b>	<b>Descent, Initiation, Penetration</b>
Tests, Allies, Enemies	Road of Trials
Approach to the Inmost Cave	
Supreme Ordeal	Meeting with the Goddess
	Woman as Temptress
	Atonement With the Father
	Apotheosis
Reward	The Ultimate Boon
<b>Act Three</b>	<b>Return</b>
The Road Block	Refusal of the Return
	The Magic Flight
	Rescue from Within
	Crossing the Threshold
	Return
Resurrection	Master of the two worlds
Return with Elixir	Freedom to Live
<b>The Archetypes: (Facets of the hero)</b>	
Higher Self, Shapeshifter, Threshold Guardians, Trickster, Shadow, Herald, Allies, Mentor	

Figure 3. A comparison of Christopher Vogler and Joseph Campbell's stages of the hero's journey, from Shaun Foster. *Steps in the Hero's Journey*. (Rochester, NY, 2008).





Figure 4. Crocodile Soldier's Turnaround, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).



Figure 5. Structural sketches for Raven's body structure, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

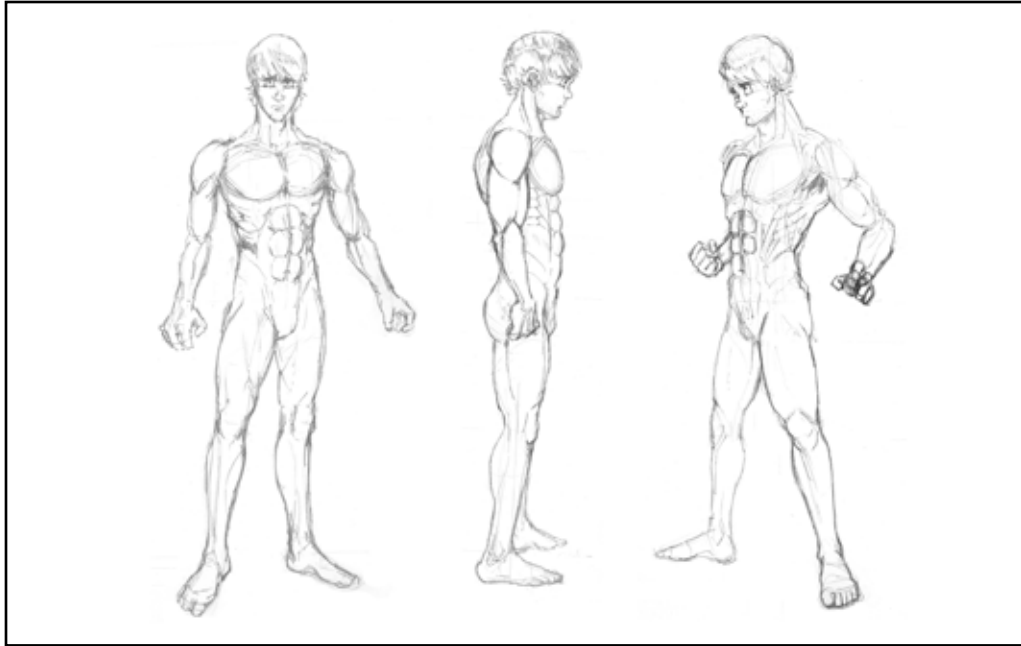


Figure 6. Raven's character model sheet, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

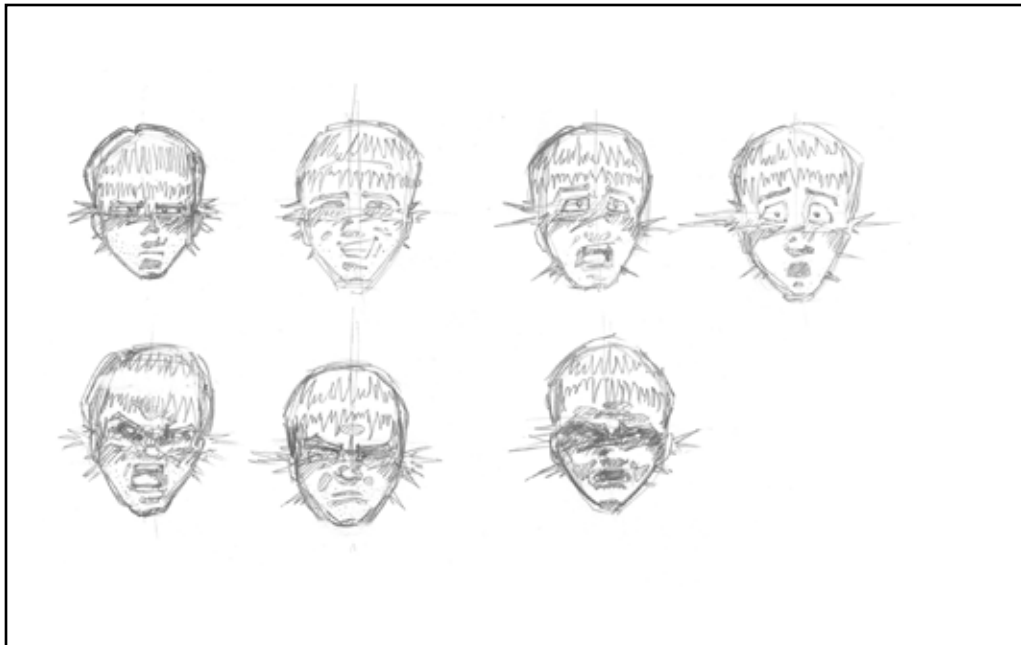


Figure 7. Raven's expression sheet, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

<p><b>Exposition</b></p> <p>Creating the facts needed for the story to begin. Giving just enough to get the audience involved in the story not providing too much information here.</p> <p>Identity of the main character/s ambiguously revealed here. We start with his reaction first.</p> <p><b>Surprise Introduction</b></p> <p>The story gets underway quickly, launching the audience into an intense action scene of explosions and fire. The audience should ask what's taking place here?</p> <p><b>Ambiguity</b></p> <p>Ambiguity creates interest, who are these characters? Panels and camera panning need to be conducted in such a way that characters are progressively introduced one by one in an interesting way.</p> <p><b>Ordinary World</b></p> <p>There is a limited awareness of the overall problem here. The common world of the village has now been disrupted.</p>	<p><b>Panels to illustrate</b></p> <p><b>moment to moment</b> a single action portrayed in a series of moments</p> <p><b>action to action</b> a single person in a series of actions</p> <p><b>subject to subject</b> changing subjects within a scene</p> <p><b>scene to scene</b> transitioning across time and space</p> <p><b>aspect to aspect</b> transitions from one aspect of a place, idea or mood to another</p> <p><b>non sequitur</b> a series of seemingly unrelated images or words.</p>	<p>KEY:</p> <p>(Text.) Indicates descriptions of what should be taking place in the panels visually.</p> <p>*** Indicates discoverable text shown revealed as an EASTER EGG ITEM.</p> <p><b>Bold Text</b> Represents sound effect graphics/noises traditionally found in comic books.</p> <p>CAPTIALS indicate a character's name.</p> <p>RENTON'S ARRIVAL - DANLANGO DESERT - TEMPORARY TEURAS</p> <p>ERCERRA</p> <p>"Malice." (Deep moan from the sky.)</p> <p><b>DABOOM!</b> (Explosion.)</p> <p>(A huge explosion Suddenly occurs somewhere along the camp's retainment wall. Parts of the wall shoot out like fiery streamers leaving Smokey trails hanging in the air. The celebration that was taking place is over.)</p> <p>R4V3N</p> <p>"What was that?"</p> <p>(Random sounds of confusion from villagers.)</p> <p>(There are screams and shouts of surprise. No one moved except for Zeke, who was running into the fray of raining debris. There stands waiting for whatever might come walking out of the smoke. R4V3N looks around and Ayem is missing. People are now yelling and some are taking refuge inside of tents, but most stare in awe.)</p> <p>(R4V3N pulls himself together and starts to run over to Zeke's side when an arm cuts him off. Zigz holds R4V3N back, watching Zeke with a serious demeanor.)</p> <p>ZIGGZ</p> <p>"No." (whispers and holds a finger to his lips)</p>
---	--	--

Brian P. Kowalczyk Computer Graphics Design EGANWO Thesis Script Preparation 1

Figure 9. Section of the detailed script, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

**PAGE ONE**

(1)

ESTABLISHING SHOT: outside, afternoon. The sun is high in the sky, the landscape is of a wide open and lonely desert, creating a sense of vulnerability. There is a gentle wind that is beginning to slowly pick up in intensity as clouds begin to roll in.

SFX: Wind Blows.  
1 CAPTION: The Danlango Desert

(2)

FULL FIGURE: R4V3N lies face down in the dirt. There is some debris and signs of a struggle.

(3)

CLOSE UP: focus on R4V3N's head and shoulders, we can visibly see the EGANWO tattoo. A few feet away from him lies a LIMBUS Device that appears to be non-functional.

(4)

EXTREME CLOSE UP: R4V3N's face is dirty and beaten. After a moment R4V3N's eye shoots open.

(5)

LONG SHOT: The wide desert expanse, and R4V3N's small silhouette can be seen lying on the ground.

(6)

INSERT: R4V3N's hand reaches and grabs at the ground for strength.

2 R4V3N: This pain... is excruciating.

(7)

MEDIUM SHOT: Low Angle, R4V3N tries to get up with a painful expression. Then falls on his face in exhaustion.

3 R4V3N: How did it happen?

(8)

EXTREME CLOSE UP: R4V3N's mouth and blood shoots out onto the ground.

SFX: Coughing.

Figure 10. Section of the final script, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

Brian P. Kowalczyk  
Thesis Narrative Treatment

## EGANWO

R4V3N wakes up in the desert unsure of where he is or how he got there. Beside R4V3N is a LIMBUS device. Looking at the sun triggers a very quick flashback, where he is running with his companion Ayem in a hurry. R4V3N can remember this, and he smiles with the thought of his friend.

Suddenly R4V3N notices how beaten and battered his body is, and the strange force that seems to be holding him there. Just then the sky begins to transform into the maw of some fantastic beast as a large beam of energy is launched downward in his direction. R4V3N struggles to evade the beam but he is hit squarely in the back and thrown into another flash back as he writhes in pain.

R4V3N can see the broad, threatening landscape of a barren wasteland before him. Blocking his path is a barbed wire fence unlike anything we are accustomed to. After a brief warning about the world, R4V3N's flashback is over.

R4V3N finds himself back in the light of the energy where a loud drumming hum permeates the air around him. R4V3N rises up into the sky slowly. The LIMBUS device that was next his body blinks to life with numbers. As R4V3N floats into the sky he remembers more...

R4V3N's memory starts to become more sporadic, a little quicker, with brief glimpses of the past events leading up to the present. R4V3N recalls three strange men stepping off of their ModaBikes, in the desert. The Crocodile Solider asks if this is who they are looking for. R4V3N shouts to Ayem that they have gone beyond the boundaries of Danlango.

Meanwhile R4V3N begins to feel immense power entering his body and rejuvenating his cells. As his body strengthens, paranoia begins to set in, and R4V3N begins to look around the desert wildly. R4V3N flashes back again. A strange creature named Def mentions the markings on his skin. A stalker stands and points ominously. R4V3N's memory flashes with images of himself colliding with Bufa, in a one on one fight. This is followed by a memory of Zeke, R4V3N's mentor explaining what the EGAWNO are and why the men were interested in it.

R4V3N is now fully engulfed in white light, his strength is unbelievable, and his euphoria has turned into hatred for those who were after him earlier. R4V3N flashes memories of him thinking the people around him know more than what they are telling. R4V3N executes the crocodile solider. R4V3N recalls a large explosion. Ziggz mentions that they must conceal R4V3N's identity. Then R4V3N remembers Renton, the source of evil who put him where he is. Renton mentions how the boys will be brought to him.

That's when the white light fades, and R4V3N falls to the cold, now nighttime, desert floor. He laughs sporadically in the darkness. After a few moments Renton reappears walking. Zeke mumbles something in astonishment. Ziggz holds the body of a fallen comrade. Quickly Renton backhands R4V3N with a sledgehammer, he mentions that there is no such thing as immortality.

Figure 11. Section of the narrative treatment, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

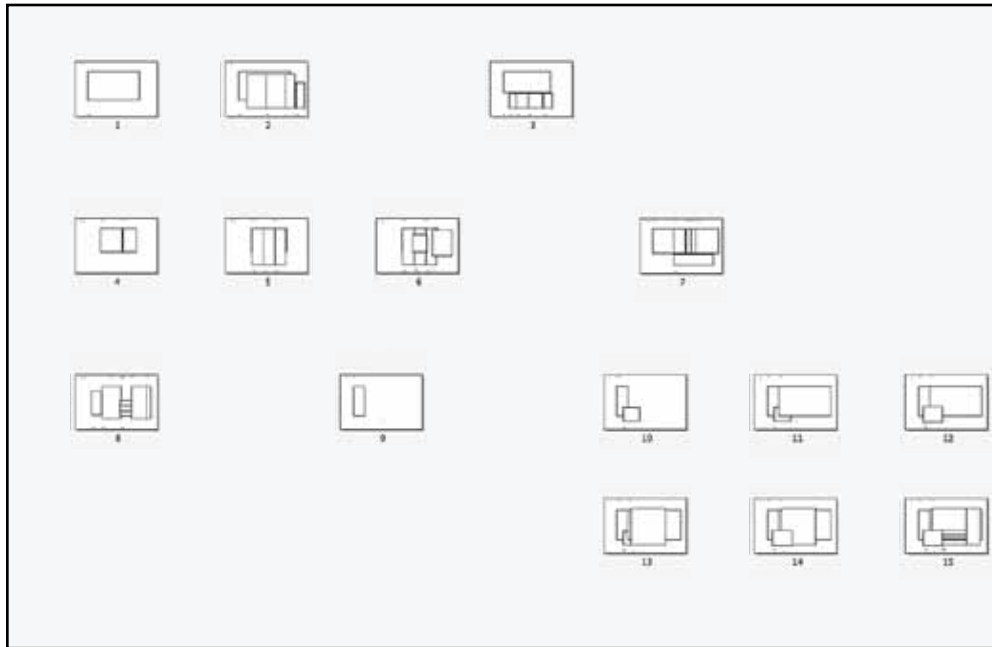


Figure 12. Spread Map, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

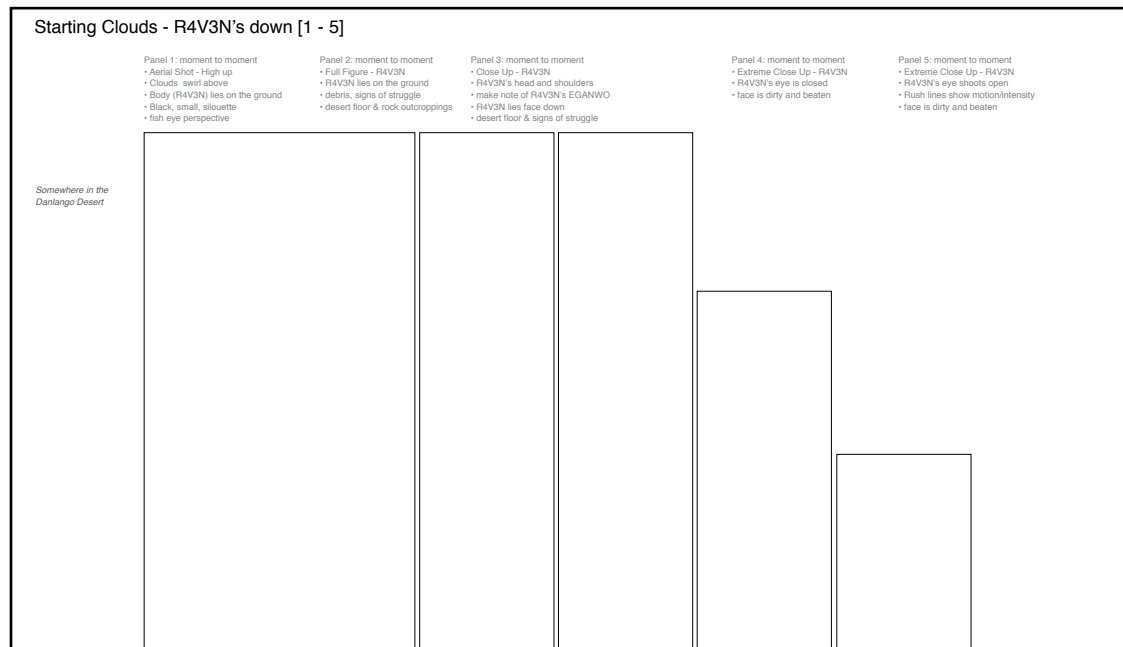


Figure 13. Blank spread for illustrating panels, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).



Figure 14. The transition from thumbnail, to rough, to final illustration, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

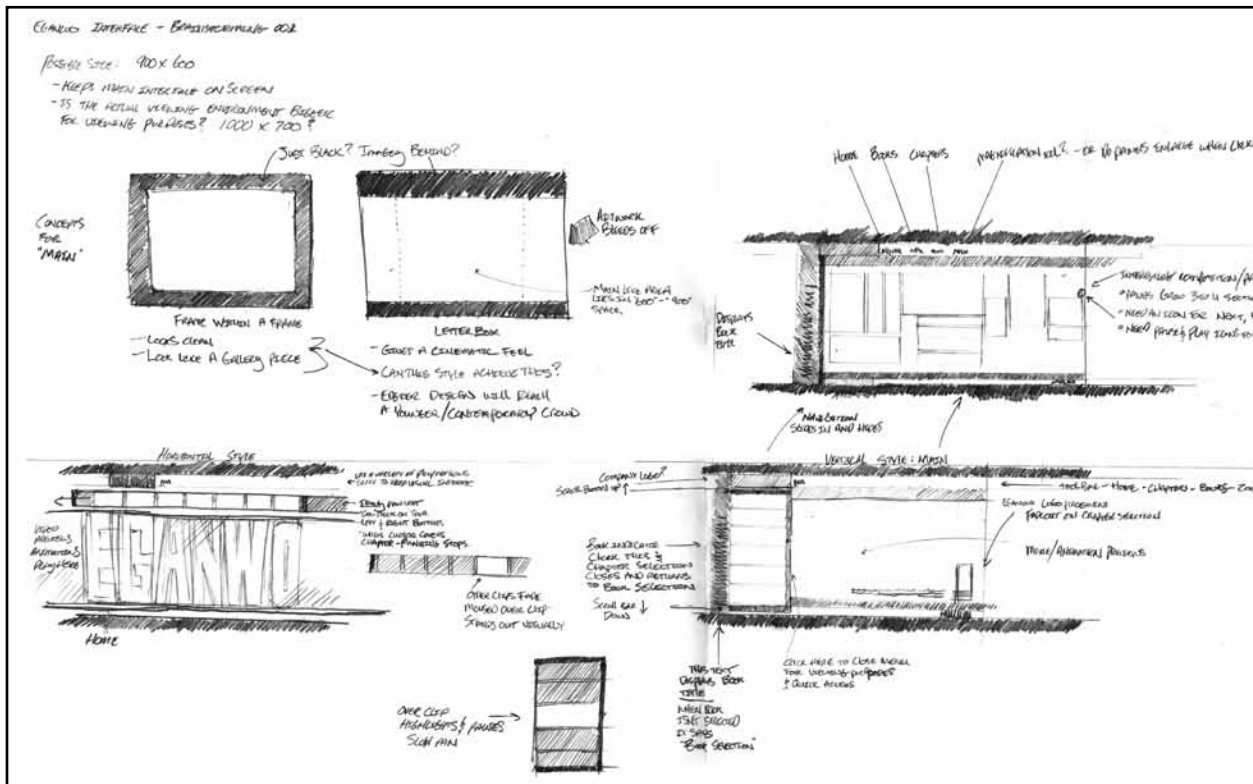


Figure 15. Rough interface sketches, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

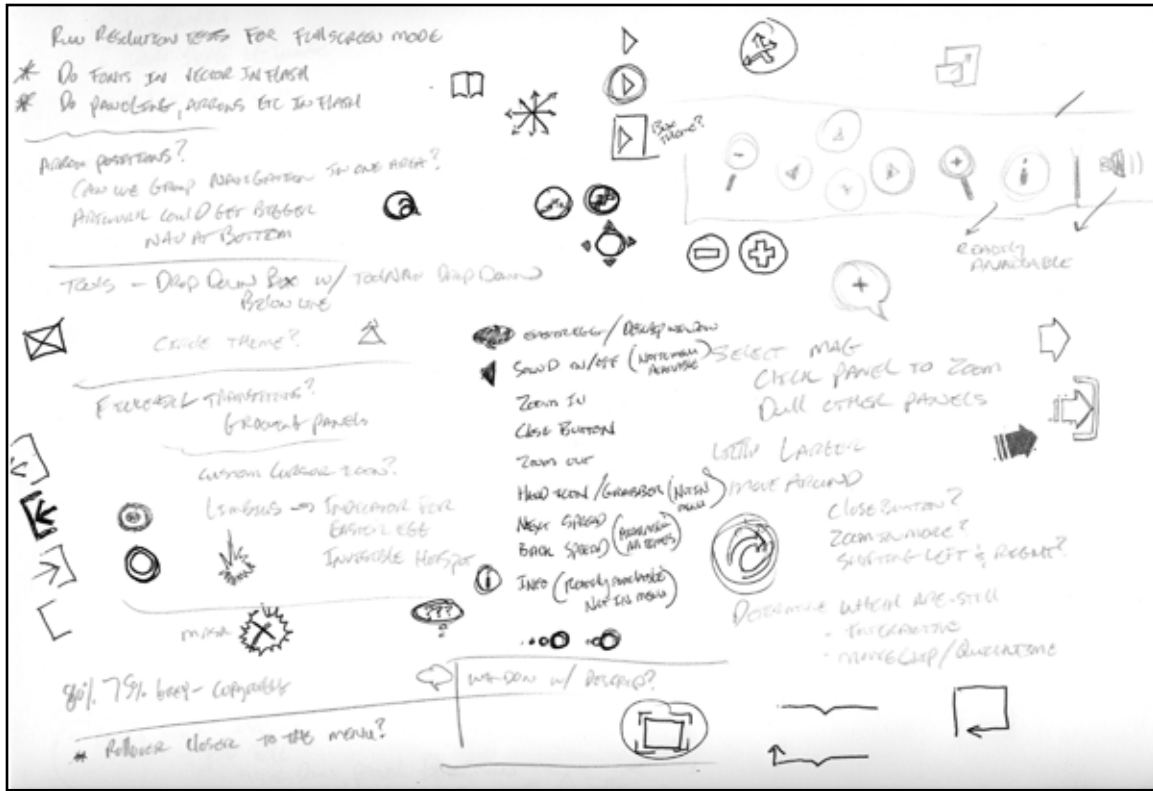


Figure 16. Notes on icons and ideas, from Brian P. Kowalczyk. EGANWO. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

```

package com
{
import flash.*;
import flash.text.TextField;
import flash.net.URLRequest;
import flash.net.URLLoader;
import flash.events.*;
import flash.net.*;
import com.adobe.transitions.Tween;
import flash.utils.Timer;
import flash.media.Sound;
import flash.media.SoundChannel;
import flash.media.SoundTransform;

public class DocumentClass extends MovieClip
{
    // ***** CUSTOM PROPERTIES *****

    private var testName:String;
    private var fileName:String;
    private var mySpreads:Array = []; // this is declared, but needs a value
    private var mySpreadIndex:int = 0;
    public var myLoader:URLLoader = new URLLoader();
    var myMovieClip:MovieClip;

    // ***** CONSTRUCTOR *****
    public function DocumentClass()
    {
        fileName = "";
        mySpreads = ["spread1.txt", "spread1.txt", "spread1.txt", "spread1.txt", "spread1.txt", "spread1.txt", "spread1.txt", "spread1.txt", "spread1.txt", "spread1.txt", "spread1.txt"];
        mySpreadIndex = 0;
    }
}

```

Figure 17. Code for the array mySpreads, from Brian P. Kowalczyk. EGANWO. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).



```

//SPREAD CONTROLLER *****
function loadComicSpread()
// load the next image
// have to give the loader the url location of the item, then a UR request
var urlRequest = new URLRequest(mySpread[comicSpreadIndex]); //loader and this code for the url
myLoader.loadBytes(urlRequest); // loading through our loader object
container.addChild(myLoader);
comicSpread++;
comicReadyQueue = true;
}

function loadSpread()
// load the next image
// have to give the loader the url location of the item, then a UR request
var urlRequest = new URLRequest(mySpread[comicSpreadIndex]); //loader and this code for the url
myLoader.loadBytes(urlRequest); // loading through our loader object
container.addChild(myLoader);
}

function animation() over 1
//over 100 frames (11 - 1)
//we have 100 frames
}

function loadSpread(event:MouseEvent){
mc = MovieClip(myLoader.container);
if (comicSpread == mySpread.length - 1){
    trace("we've finished the url.");
} else if (comicSpread == 0 && comicSpread == mySpread.length){
    if (container.numChildren > 0){
        trace("unload spread");
        trace("unload movie clip");
        mc.clear();
        mc.removeChild(mc);
    }
}
// load the next image
// have to give the loader the url location of the item, then a UR request
loadSpread++;
if (comicSpread == mySpread.length){
    comicSpread--;
    trace("we want the url.");
}
trace("comic spread is now " + comicSpread); //loader and this code for the url
myLoader.loadBytes(urlRequest); // loading through our loader object
container.addChild(myLoader);
}
}

```

Figure 18. The loader code for the comic, from Brian P. Kowalczyk. EGANWO. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

```

// ***** TWEEPER ANIMATION TWEEPER *****
var coverTweenTimelineObject = {x:150, y:100, time:1, transition:"easeOutQuart"};
var coverTimelineObject = {x:200, y:100, time:1, transition:"easeOutQuart"};
var menuTimelineObject = {x:150, y:100, time:1, transition:"easeOutQuart"};
var menuTimelineObject2 = {x:150, y:100, time:2, transition:"easeOutQuart"};
var menuTimelineObject3 = {x:150, y:100, time:3, transition:"easeOutQuart"};
var menuTimelineObject4 = {x:150, y:100, time:4, transition:"easeOutQuart"};
var menuTimelineObject5 = {x:150, y:100, time:5, transition:"easeOutQuart"};
var menuTimelineObject6 = {x:150, y:100, time:6, transition:"easeOutQuart"};
var menuTimelineObject7 = {x:150, y:100, time:7, transition:"easeOutQuart"};
var menuTimelineObject8 = {x:150, y:100, time:8, transition:"easeOutQuart"};
var menuTimelineObject9 = {x:150, y:100, time:9, transition:"easeOutQuart"};
var menuTimelineObject10 = {x:150, y:100, time:10, transition:"easeOutQuart"};
var menuTimelineObject11 = {x:150, y:100, time:11, transition:"easeOutQuart"};
var menuTimelineObject12 = {x:150, y:100, time:12, transition:"easeOutQuart"};
var menuTimelineObject13 = {x:150, y:100, time:13, transition:"easeOutQuart"};
var menuTimelineObject14 = {x:150, y:100, time:14, transition:"easeOutQuart"};
var menuTimelineObject15 = {x:150, y:100, time:15, transition:"easeOutQuart"};
var menuTimelineObject16 = {x:150, y:100, time:16, transition:"easeOutQuart"};
var menuTimelineObject17 = {x:150, y:100, time:17, transition:"easeOutQuart"};
var menuTimelineObject18 = {x:150, y:100, time:18, transition:"easeOutQuart"};
var menuTimelineObject19 = {x:150, y:100, time:19, transition:"easeOutQuart"};
var menuTimelineObject20 = {x:150, y:100, time:20, transition:"easeOutQuart"};
var menuTimelineObject21 = {x:150, y:100, time:21, transition:"easeOutQuart"};
var menuTimelineObject22 = {x:150, y:100, time:22, transition:"easeOutQuart"};
var menuTimelineObject23 = {x:150, y:100, time:23, transition:"easeOutQuart"};
var menuTimelineObject24 = {x:150, y:100, time:24, transition:"easeOutQuart"};
var menuTimelineObject25 = {x:150, y:100, time:25, transition:"easeOutQuart"};
var menuTimelineObject26 = {x:150, y:100, time:26, transition:"easeOutQuart"};
var menuTimelineObject27 = {x:150, y:100, time:27, transition:"easeOutQuart"};
var menuTimelineObject28 = {x:150, y:100, time:28, transition:"easeOutQuart"};
var menuTimelineObject29 = {x:150, y:100, time:29, transition:"easeOutQuart"};
var menuTimelineObject30 = {x:150, y:100, time:30, transition:"easeOutQuart"};
var menuTimelineObject31 = {x:150, y:100, time:31, transition:"easeOutQuart"};
var menuTimelineObject32 = {x:150, y:100, time:32, transition:"easeOutQuart"};
var menuTimelineObject33 = {x:150, y:100, time:33, transition:"easeOutQuart"};
var menuTimelineObject34 = {x:150, y:100, time:34, transition:"easeOutQuart"};
var menuTimelineObject35 = {x:150, y:100, time:35, transition:"easeOutQuart"};
var menuTimelineObject36 = {x:150, y:100, time:36, transition:"easeOutQuart"};
var menuTimelineObject37 = {x:150, y:100, time:37, transition:"easeOutQuart"};
var menuTimelineObject38 = {x:150, y:100, time:38, transition:"easeOutQuart"};
var menuTimelineObject39 = {x:150, y:100, time:39, transition:"easeOutQuart"};
var menuTimelineObject40 = {x:150, y:100, time:40, transition:"easeOutQuart"};
var menuTimelineObject41 = {x:150, y:100, time:41, transition:"easeOutQuart"};
var menuTimelineObject42 = {x:150, y:100, time:42, transition:"easeOutQuart"};
var menuTimelineObject43 = {x:150, y:100, time:43, transition:"easeOutQuart"};
var menuTimelineObject44 = {x:150, y:100, time:44, transition:"easeOutQuart"};
var menuTimelineObject45 = {x:150, y:100, time:45, transition:"easeOutQuart"};
var menuTimelineObject46 = {x:150, y:100, time:46, transition:"easeOutQuart"};
var menuTimelineObject47 = {x:150, y:100, time:47, transition:"easeOutQuart"};
var menuTimelineObject48 = {x:150, y:100, time:48, transition:"easeOutQuart"};
var menuTimelineObject49 = {x:150, y:100, time:49, transition:"easeOutQuart"};
var menuTimelineObject50 = {x:150, y:100, time:50, transition:"easeOutQuart"};
var menuTimelineObject51 = {x:150, y:100, time:51, transition:"easeOutQuart"};
var menuTimelineObject52 = {x:150, y:100, time:52, transition:"easeOutQuart"};
var menuTimelineObject53 = {x:150, y:100, time:53, transition:"easeOutQuart"};
var menuTimelineObject54 = {x:150, y:100, time:54, transition:"easeOutQuart"};
var menuTimelineObject55 = {x:150, y:100, time:55, transition:"easeOutQuart"};
var menuTimelineObject56 = {x:150, y:100, time:56, transition:"easeOutQuart"};
var menuTimelineObject57 = {x:150, y:100, time:57, transition:"easeOutQuart"};
var menuTimelineObject58 = {x:150, y:100, time:58, transition:"easeOutQuart"};
var menuTimelineObject59 = {x:150, y:100, time:59, transition:"easeOutQuart"};
var menuTimelineObject60 = {x:150, y:100, time:60, transition:"easeOutQuart"};
var menuTimelineObject61 = {x:150, y:100, time:61, transition:"easeOutQuart"};
var menuTimelineObject62 = {x:150, y:100, time:62, transition:"easeOutQuart"};
var menuTimelineObject63 = {x:150, y:100, time:63, transition:"easeOutQuart"};
var menuTimelineObject64 = {x:150, y:100, time:64, transition:"easeOutQuart"};
var menuTimelineObject65 = {x:150, y:100, time:65, transition:"easeOutQuart"};
var menuTimelineObject66 = {x:150, y:100, time:66, transition:"easeOutQuart"};
var menuTimelineObject67 = {x:150, y:100, time:67, transition:"easeOutQuart"};
var menuTimelineObject68 = {x:150, y:100, time:68, transition:"easeOutQuart"};
var menuTimelineObject69 = {x:150, y:100, time:69, transition:"easeOutQuart"};
var menuTimelineObject70 = {x:150, y:100, time:70, transition:"easeOutQuart"};
var menuTimelineObject71 = {x:150, y:100, time:71, transition:"easeOutQuart"};
var menuTimelineObject72 = {x:150, y:100, time:72, transition:"easeOutQuart"};
var menuTimelineObject73 = {x:150, y:100, time:73, transition:"easeOutQuart"};
var menuTimelineObject74 = {x:150, y:100, time:74, transition:"easeOutQuart"};
var menuTimelineObject75 = {x:150, y:100, time:75, transition:"easeOutQuart"};
var menuTimelineObject76 = {x:150, y:100, time:76, transition:"easeOutQuart"};
var menuTimelineObject77 = {x:150, y:100, time:77, transition:"easeOutQuart"};
var menuTimelineObject78 = {x:150, y:100, time:78, transition:"easeOutQuart"};
var menuTimelineObject79 = {x:150, y:100, time:79, transition:"easeOutQuart"};
var menuTimelineObject80 = {x:150, y:100, time:80, transition:"easeOutQuart"};
var menuTimelineObject81 = {x:150, y:100, time:81, transition:"easeOutQuart"};
var menuTimelineObject82 = {x:150, y:100, time:82, transition:"easeOutQuart"};
var menuTimelineObject83 = {x:150, y:100, time:83, transition:"easeOutQuart"};
var menuTimelineObject84 = {x:150, y:100, time:84, transition:"easeOutQuart"};
var menuTimelineObject85 = {x:150, y:100, time:85, transition:"easeOutQuart"};
var menuTimelineObject86 = {x:150, y:100, time:86, transition:"easeOutQuart"};
var menuTimelineObject87 = {x:150, y:100, time:87, transition:"easeOutQuart"};
var menuTimelineObject88 = {x:150, y:100, time:88, transition:"easeOutQuart"};
var menuTimelineObject89 = {x:150, y:100, time:89, transition:"easeOutQuart"};
var menuTimelineObject90 = {x:150, y:100, time:90, transition:"easeOutQuart"};
var menuTimelineObject91 = {x:150, y:100, time:91, transition:"easeOutQuart"};
var menuTimelineObject92 = {x:150, y:100, time:92, transition:"easeOutQuart"};
var menuTimelineObject93 = {x:150, y:100, time:93, transition:"easeOutQuart"};
var menuTimelineObject94 = {x:150, y:100, time:94, transition:"easeOutQuart"};
var menuTimelineObject95 = {x:150, y:100, time:95, transition:"easeOutQuart"};
var menuTimelineObject96 = {x:150, y:100, time:96, transition:"easeOutQuart"};
var menuTimelineObject97 = {x:150, y:100, time:97, transition:"easeOutQuart"};
var menuTimelineObject98 = {x:150, y:100, time:98, transition:"easeOutQuart"};
var menuTimelineObject99 = {x:150, y:100, time:99, transition:"easeOutQuart"};
var menuTimelineObject100 = {x:150, y:100, time:100, transition:"easeOutQuart"};

```

Figure 19. Tweener code for the menu navigation, from Brian P. Kowalczyk. EGANWO. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

```

<<<<<<<<
<<<<<<<
<!-- not visible -->
var $ProgressBar = $('#ProgressBar');
var $ProgressBarLabel = $('#ProgressBarLabel');

<!-- progress bar -->
$ProgressBar.css('width', '0%');
$ProgressBarLabel.css('width', '0%');

<!-- update progress bar and label -->
$.ajax({
  url: '...',
  success: function(data) {
    // update progress bar and label
    $ProgressBar.css('width', data.loaded / data.total * 100 + '%');
    $ProgressBarLabel.css('width', data.loaded / data.total * 100 + '%');
  }
});

```

Figure 20. The FLV loader code, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).

**EGANWO: The Graphic Novel's Escape to Digital Media**

**SURVEY**

Are you familiar with comic books? Y N (if yes, please provided more information)

Rating EGANWO, how well do you think it has captured the way a comic book functions/feels?  
(Not at all) 1 2 3 4 5 6 7 8 9 10 (Perfectly)

Does it add anything to the experience?

Did the visual appearance of the application create an immersive experience?

Briefly describe what took place in this issue of EGANWO to a friend.

Please provide any comments/suggestions/critiques about the interface/comic here.

Figure 21. Example of the survey administered, from Brian P. Kowalczyk. *EGANWO*. <http://www.briankowalczyk.com/thesis> (accessed Oct. 30, 2009).