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Testing an Original Story in Multiple Artistic Mediums

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Testing an Original Story in Multiple Artistic Mediums

This thesis submitted in partial fulfillment of Honors

By

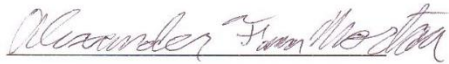
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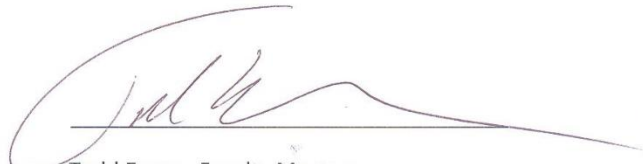
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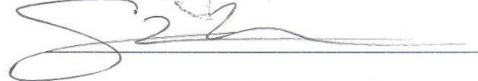
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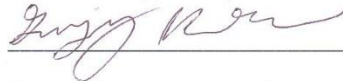
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ABSTRACT

The Story is one of the oldest forms of communication between humans. Various methods have enhanced and updated the Art in a variety of ways since the concept was created. In modern times, a story can exist in multiple mediums because of the variations that humans use today to tell stories. I present an artistic project that will show my development of an original universe, plot, and characters into a storyline introduction for enjoyable purposes. The belief was that these ideas I created could succeed in multiple formats, but I would need to narrow it down and test what I had created. I chose two different mediums, a Written Narrative and a Video Game, as means to tell as much of my story as possible. By using the opinions of others, I'll learn if either project can be successful in telling my story and which method offered the best experience with my particular story ideas to share with an individual.

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INTRODUCTION

The outcome that I wanted to achieve from this Artistic Thesis was and remains relatively straightforward. I wanted to share an original story created by me and test how different the development experience would be if I used the same story in multiple mediums. I was inspired by the idea of seeing how people reacted/responded to my work that was very much the same, and yet different. By only making the first part of my ever-expanding story, I could swiftly identify which medium to use if I ever wanted to expand the project. I simply sought to answer a few simple questions by crafting something using the two mediums I've selected. Which Medium created the best setting for my storyline? What would be the recommended steps for future development? Simple, punctual, and to the point. Again, let me clarify, the theory of this project isn't to prove whether *Lord of the Rings* was better as a trilogy of books or if the film adaptations were superior. This is not the goal of this Thesis. Instead, it is an art piece that I have put a great deal of effort and detail into to test the outcome of my own creative ideas and workflow. To summarize, create the first version of the two projects using the same storyline and universe and receive some feedback to find out which version I should continue to work on in the future. So I set out to create this two part project, working in a variety of programs, some simple, like writing in Microsoft Word, some I had prior experience in, such as Adobe Photoshop, and newer development programs, such as RPG Maker VX ACE. As the project advanced, I ran into an assortment of challenges ranging from scripting errors, data loss, graphical issues, and even writer's block. I often found a solution using the skills I had learned or an alternative method from my research, but many of my breakthroughs involved my own unique ideas and reasoning to achieve goals. This particularly helped remedy the complications that obstructed the project's development.

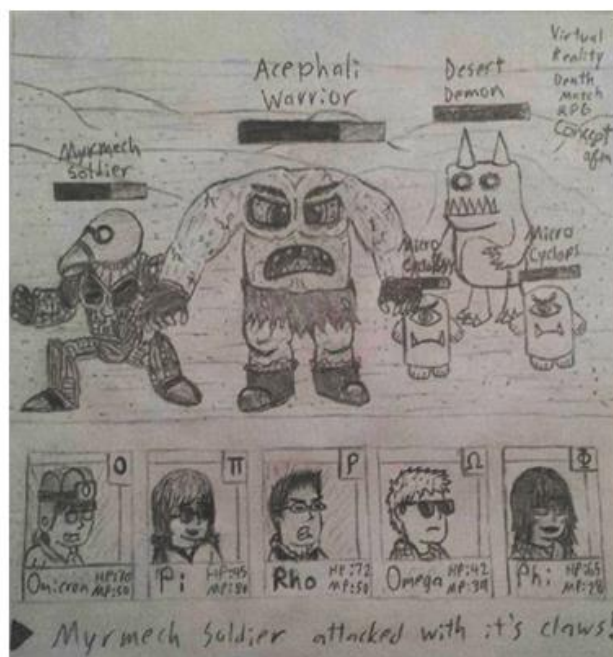
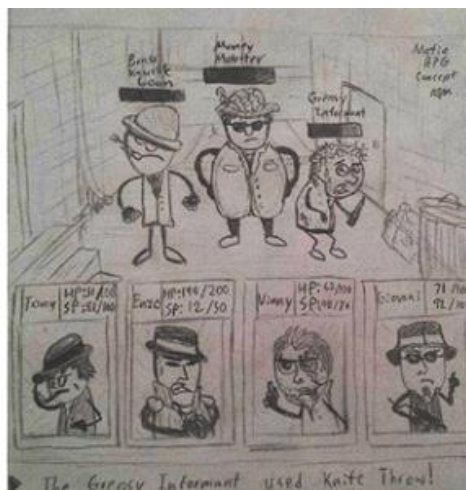
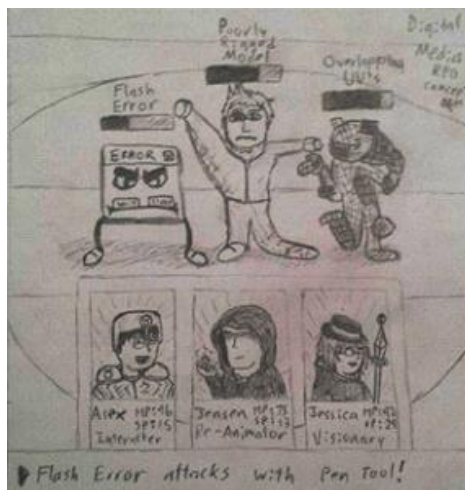
INITIAL CONCEPTS

I. Preliminary Organization

The original objective I had for my creative Thesis was also quite simple. I'm a Game Design student with a passion specifically in environment design, so naturally I wanted to make some form of game and use it to show off my environment design skills and learn about other aspects of the game design process. A full 3D Game in Unreal Engine 4 was considered, but was quickly labeled as unmanageable for just one person. After realizing this, the decision was made to make some form of a Role-Playing Game. Research began to research potential game engines that I could use to achieve this. Construct, RPG Maker VX Ace, and Game Maker were all possibilities initially, as I've had some experience with a version all three and they all had the functionality to design this kind of project. Ultimately, RPG Maker VX Ace was chosen for three main reasons; it was already set up as the game type I wanted to make, (which saved me many hours of struggle, research, work, and bug fixing), I already owned it, and its premade assets would help make the game testable before I added my own content. I began writing ideas for my research and game as early as June 4th 2014. A formal Index system was created on a Google Document in order to keep track of all information, accomplishments, problems, solutions, research, and to have a ready outline for this paper. A Timeline was also created to keep track of goals and hold myself accountable. Early in the process of working on my initial idea, I decided to start recording myself talking about the story ideas and all known instances of the world, characters, and plot expansion. However, the audio logs were scrapped quickly because they simply took too long to find information from.

II. Original Story Conceptions

Very early on in development, an idea had to be decided that allowed for the development of characters, plot, and the universe of the game. As I was creating an RPG, I went back and replayed/refreshed myself on some general information for some of my favorite RPGs, such as Paper Mario, Earthbound, and Final Fantasy IV for inspiration and gameplay ideas. Many early ideas were considered for my Thesis including an RPG focusing around the Digital Media Major here at ETSU, a Film Noir Styled Mafia Hit Squad RPG, and an Endless Ancient Greek Themed Virtual Reality Simulation Death Match RPG. A brief bit of time was spent making concept art and story ideas for all three concepts. I loved all my ideas, but I decided the Endless Ancient Greek Virtual Simulation Death Match RPG Storyline could be the most fleshed out and therefore began my production.



III. Initial Thesis Question

All the organization and storyline decisions I had accomplished needed a question to drive the Thesis forward into an interesting and productive project. This was the first real complication of the project. I was only making a game because of my Interaction and Game Design Concentration. Because of this, my initial Thesis Question was fairly weak: "What makes a Video Game good?" The idea was that I would use the research part of the Thesis to identify a number of core elements that a game needed to be good, implement them into my game as best as I could, and talk about them in this Thesis paper. This, unfortunately, was a terrible idea, as it was open ended, up to an individual's interpretation, and a question that was impossible to answer in a simple format. Books have been written about that subject and question with no widespread results, mostly due to how complex of a question it is.

CHOOSING THE RIGHT QUESTION/STATEMENT

The deciding factor that assisted me to come to the conclusion that my initial question wasn't reachable or was not what I was trying to accomplish happened in one of my first presentations/meetings with my advisors. The presentation, without a doubt, was a major wake up call. Two of my advisors pointed out that my Thesis question didn't line up with what I was doing project wise. They commented that they were excited for the story and the game, but what I was presenting didn't work with what I wanted the answer to. So despite working on the project countless hours for almost every day of the week, my actual research question didn't have a valid reason for existence. What makes a video game good and the core concepts idea was removed from my thought process as a result. This was not a failure, but a successful identification of a concentration issue early on in the Development of my Thesis.

After my failed presentation, I spent a good deal of time (Three Weeks) reevaluating what I wanted to do with this Thesis. The first objective was to reevaluate the levels of project success and simplify them greatly. I did not reduce my project goals, but the parameters of what it meant for success in this project had to change to better accommodate whatever my new question was. Initially, my highest level of success was making a game that was capable of being green lit on Steam. This goal was quickly scrapped, but remains a potential future goal many years from now. The remaining parameters of completing various versions of the game too became irrelevant as I knew my Thesis Question was changing. At first, I thought "What does it take to produce a video game?" would potentially be a good replacement question. This concept, while it was a more reachable goal, still didn't excite me nor was it what I had been trying to do initially. With this concept in mind, I attempted to recall what my original passion for this project had been centered around. I reminded myself that it had been all about the story from the beginning. I mean, I even turned down a few simpler ideas I was interesting in potentially forming a Thesis question around from my advisor, such as "what makes a good boss fight?" This was done to preserve my initial expansion of the universe that I had crafted. If that doesn't hint at its importance as the driving force for this project, I don't know what does.

Once the realization hit me, the answer had become obvious of what I wanted to do. The Story about a Battle to the Death between young adults in an Ancient Greek Themed Virtual Reality Simulation had always been the core driving point of this Thesis. It determined the course of most of my actions and was what I was really working on all this time. I reevaluated my prior assumption that the story belonged in a RPG Game format. By questioning this, I concluded that the story could potentially succeed in any medium or format. Therefore, I wanted my Thesis to be all about finding which Medium would be the best environment for me to present my original story. This helped me develop my new and current Thesis Statement "Testing an Original Story in Multiple Artistic Mediums."

CHOOSING THE RIGHT MEDIUMS

Now that I had my new question, I needed to redefine what the levels of project success meant. Since I was now testing multiple mediums with the same storyline, I wanted all tested mediums to be completed up to the same point. I would then let a wide variety of people try both versions of the story to, and they'd pick which medium they thought worked better to showcase the world and plot. Only the prologue and most of the first chapter was selected to be completely finished, as that was all that was needed for the testing. The concept was that there really wasn't a designated question to be answered, but there was an outcome for my report and paper. This allowed me to focus more on process and what I was learning. Once I had determined that I wanted to experiment using multiple methods of telling the beginning of the same story, I needed a formula to decide which mediums were right for me and would best suit the experiment. The solution I created relied heavily on the initial developments, past work, variance, time management, and personal interest. This led to the following results:

I. **Video Game**

At least half of the initial development on this project was put towards trying to learn about game design processes, successful RPG elements, and working with/improving the RPG Maker VX Ace engine. Since a majority of the work prior to the decision to include multiple mediums had been towards a story in the form of a Role-Playing Game, this was the natural choice for one of the selected mediums. It had plenty of areas that I was interested in including opportunities for level design, asset creation, plot development, and interesting characters. This medium also combined a wide variety of Digital Media work I could learn about, practice, and experience, such as Animation, Coding, Character Artist, and Environment Artist.

II. **Written Narrative**

The obvious goal for 2nd medium was to find something very different from what I had already chosen. The catch was that it also had to be something that I had interest in and was both helpful, comparable, and doable within time constraints. It didn't take long to realize that the direct opposite to something as complex as a video game was a form of written work. No visuals, no sound, no movement, only simple text on the page to paint out the world, give the characters development and move the plot forward. This was an obvious challenge for me, as I have never written anything this large outside of school assignments. The next step was deciding what form of written work. Multiple types such as a play and movie script were considered, but I figured that keeping it as simple as possible and just writing a written narrative would give it the best possible contrast to my Video Game and that would do the best job to test the different medium experiment.

III. **Pitfall: An Interactive Experience and other Medium Ideas**

I deliberated if a third medium was necessary to complete this experiment. At first I wanted a meeting point between my other two mediums. A halfway point that contained the key parts of the two other mediums and combined them into a similar goal. At first, I couldn't think of anything that fit this exactly, with many mediums themselves being part of a Video Game (Animation, Writing, Graphics, etc.) and writing being the simplest form to contrast this. After much deliberation, the search for a third medium lead me to think of an Interactive Experience. I had made one before in school that consisted of animation and gameplay choices, but was a simplified version of a game with many examples of written choices that the user would just click on to progress the story. At first, this seemed to be an excellent idea, bridging the gap between the two other mediums, while also functioning as increased motivation to develop assets that could be used by multiple mediums, such as animations and art assets. However, after a brief period of storyboarding this interactive experience, as well as making a list of interactive elements, due to time constraints it became clear that the interactive experience was becoming a burden on the success of the overall project. Making the same story twice was hard enough, and a third instance was not helping the matter. The final straw came from a video I watched from the YouTube Channel Extra Credits. According to the video, an interactive experience and a game can be defined as the same thing and that it's important to remember that we should let anything that adds to the individual's experience happen, not limit the art by focusing on why its definition matters (Extra Credits, "Extra Credits - What Is a Game? - How This Question Limits Our Medium"). With guidance from my Thesis Mentor, the video, and my own beliefs on the subject, I dubbed the Interactive Experience an unnecessary edition to the project. It relied on too many similar assets from the RPG, and was thus a dumbed down version of the game that required its own unique set of coding, which was arguably my least favorite aspect of game design. It also made no sense to create a version of the game with less unique content that took much longer to program that was virtually the same thing by definition. In order to combat this, I began to remove elements from this medium idea, eventually converting it to a simple text based adventure game with minimal pictures and choices. Interestingly enough, this time, it seemed like a simplified version of the Written Narrative instead, which again seemed redundant and would have taken a long time to produce to completion. It was removed in full after this last variation, as it was initially a well thought out endeavor that was eventually deemed unnecessary in terms of both practicality and realism in getting the entire project done. It would be better to have two finished mediums of high quality work, then spread myself too thin with three.

CREATING A UNIVERSE

I. Story Universe Summary

The game's world is set in the very far future. The planet has already gone through two nuclear wars and not many safe places remain. The planet's crust has broken up landmasses and created new continents, most of which are uninhabitable. The largest livable continent has had the blessing of pieces for 3 generations. They have rebuilt their world to far surpass the one we have now. Everyone gets along and no large scale fighting or disagreement takes place. However, the main problem is overpopulation. The land mass is not big enough to deal with the growing number of civilians. Solutions are made such as taking to the stars, building homes under water, and other ideas. The idea the game focuses on is a particular experiment, dubbed "Project Comet." that involves moving people into a virtual reality environment with limitless space, hence the title. The team behind this project creates the world's system, which also shares the name. After 3 years of development, the system works successfully and is essentially a miracle machine, giving subjects inside seemingly endless life, increased abilities, both physical and magical, and plenty of space. The government has had issues with the project since day one, however. Their main issue is in the form of a question: "Will people continue to be peaceful in this new virtual world like in the real world?" The creator of the A.I. System was so sure that it could find a way to make peace between the people on its own that he proposed an idea that the government would later sign off on. First, gather a set number of people (24) and train them in the facility for over a year. They would need to be young adults around the age 16-18 to prove that this test will be effective for future generations. Their families would receive endless amounts of benefits and bonuses for appreciation with this testing. During this time, the Project Comet team will create a specific world for this experiment, using 10 specifically created A.I to test all the scenarios beforehand on repeat. When the year was up, the 24 young individuals would be placed into the system in a death match type scenario across many dangerous zones and planes. None of the individuals would have any of their memories inside the system. There can be only one victor. Kill or be killed. After which the trial is reset back to the original state. The catch is that the last 6 people to be killed would remember the previous trial (1/4). The point of the test would be seeing if the A.I. can keep some of the players alive, overcoming enemies and boss A.I. the programmers throw at them and ultimately create a stalemate scenario in which the remaining combatants refuse to kill each other with the power of its influence. How the combatants interact with each other for study purposes in the environment as well. If this stalemate scenario is ever reached, a new goal will be

given to the A. I. to continue to keep the peace. One that involves implementing the original A.I. Testers to reactivate, and see how the Project itself can protect the remaining human testers.

II. Main Plot Elements

This pretty much sets up the idea of the game. Only you, as the player, will know nothing about any of this. You'll be put into the role of several players in a party, battling through the different zones, trying to understand why you can't remember anything and where this journey is taking you. Another misconception is that everyone believes that the company in charge of the simulation is evil. The ultimate reveal towards the end of the game is that the real world player/reader is in fact the A. I. "Project Comet" trying to guild all these characters into this perfect peace like scenario, by solving issues thrown at it. I have never been involved in any kind of fraternity, but I've decided to make a majority of the characters have code names based on the Greek alphabet. Each character's name will be one letter spelled out. For example: Omega will be a character, Kappa will be a character, and Alpha will be a character. I'm doing this because of the games world and storyline. 24 people are put into a virtual reality trial. It's a death match type idea. Only one can win. When a winner is declared, the trial resets itself. People that die 6th or sooner from last will remember the previous trial. The A.I. controlling the trials is trying to create a stalemate event in order to progress a much larger goal for a seemingly evil corporation.

III. Expanding the Universe/Cut Content

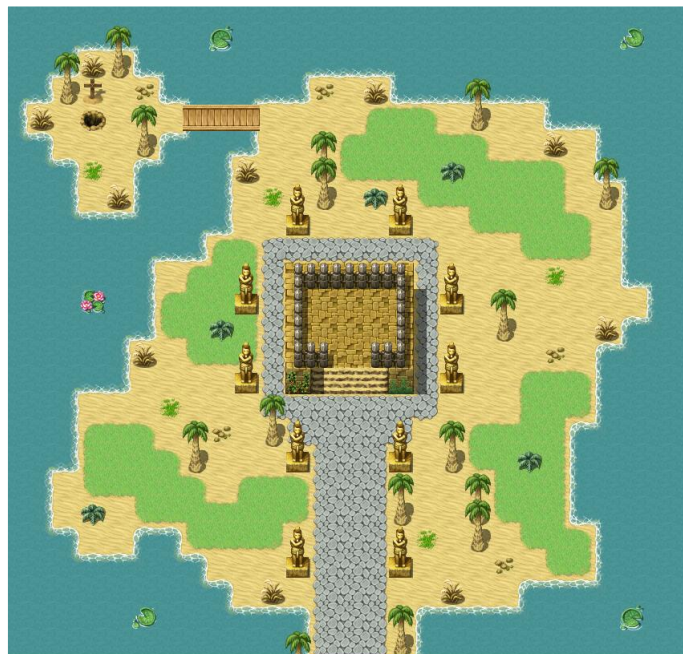
Despite me doing all the extra work towards all the Universe and plot, I'm only a one man team. Early on in the project, like maybe the first few weeks before meeting with my advisors, I thought I could get it all done in a years' time. Sadly, this was clearly not the case. As time went on, I became much more realistic in what I wanted to accomplish and knew that a very large majority of the story was not going to be able to exist in both mediums for this Thesis project. This meant that a lot of the content I created doesn't have a place in the two mediums because I won't get that far in the story. At least not at this time that is. However, I figured I should showcase these little extra things I did to show the substantial work I went into during the expansion and growth of this project. First up is a list pictured below detailing every location and zone in the game, chapter by chapter in order. I was even able to include the different trial numbers! This took several weeks to decide, as the extended plot had to be loosely crafted in order to finalize this information.

Game Map/Area List by Chapter	
<u>Prologue-Trial 121:</u> Tutorial Zone 22 Server Station Room 6	<u>Chapter 5-Trial 124:</u> Tutorial Zone 18 Server Station Room 5 Neon Zone
<u>Chapter 1-Trial 122:</u> Tutorial Zone 7 Server Station Room 2 Forest Zone Desert Zone	Plains Zone Glitched Zone Steel Zone Opposition Tech. Labs Wasteland Zone
<u>Chapter 2-Trial 122:</u> Islands Zone Glacier Zone Relic Ruins (Glacier)	<u>Chapter 6-Trial 666:</u> Tutorial Zone 3 Server Station Room 1 Glacier Zone (2) Canyon Zone (2)
<u>Chapter 3-Trial 123:</u> Tutorial Zone 13 Server Station Room 4 Mountains Zone Swamp Zone	Plains Zone (2) Wasteland Zone (2) Relic Ruins (Wasteland) Dark Void Zone
<u>Chapter 4-Trial 123:</u> Jungle Zone Canyon Zone Relic Ruins (Canyon)	<u>Epilogue/Postgame-Trial -1:</u> Tutorial Zone ∞ Server Station Room ∞

Next we have a two sample pages taken from my extended story synopsis. It went all the way up to the Island Zone featured in the timeline from the image above. It also has character dialogue not shown in either Medium version.

<p>-She explains that the two of them were going to wait in a small desert village in the zone for of A.I. merchants and citizens until Omicron woke up and caught back up. However, this plan quickly changed when they realized the town was under bandit control. She got out and went to go find Omicron for assistance but assumes her friend did not and was captured. She then states that she was attacked by those hawks which broke her jug of water. She then says that the two of them need to hurry, as "Rho" might be injured or...</p>	
<p>-She trails off at the thought of this individual being hurt or dead, which Omicron figures out that the two of them were together as a couple.</p>	
<p>-Omicron states that he will gladly help and for her to lead the way.</p>	
<p>-The girl is seems surprised that he's willing to help, then delighted.</p>	
<p>-Omicron asks that he should tell him her name before they go deeper into the desert.</p>	<p>Page 8 and 19 from Extended Storyline Synopsis V3</p>
<p>-Instead, the girl draws her weapon quickly which alarms Omicron.</p>	
<p>-She yells out "I know you're behind those rocks! Show yourself!"</p>	
<p>- A group of bandits that had been tracking the girl to finish her off come out of hiding. They make their presence known by throwing a spear which the girl blocks with her battle-axe.</p>	
<p>-She tells Omicron that her name is Pi, and that he might want to get his weapon out for battle.</p>	<p>-Omicron realizes that this is Omega and wonders if he past the trust test, considering he was chasing another player to help kill him.</p>
<p>-The group of bandits rush the duo and a fight breaks out with Omicron and Pi killing all the bandits.</p>	<p>-"Well it seems that you made it through the tunnels", he states calmly. He then proceeds to kick Nu across the face. "I take it you're running away from these two because you betrayed them in the maze? Hmm? Possibly killed Lambda? Answer me!" Before kicking Nu again in the face. Omicron and the others know it's in their best interest to keep quiet.</p>
<p>-Pi interrogates the two final bandit that didn't take part in the assault. She asks one where "Rho" is.</p>	<p>-Nu collapses from the pain he's in, not able to stand up right. Omega continues, "No that's not it.... Perhaps they left you to die in there, and you wanted revenge, is that it?"</p>
<p>-One bandit taunts her, saying that "your boyfriend is long dead by now" and makes a joke about cannibalism before getting his head sliced off. His body quickly disappears all things have done up onto this point.</p>	<p>-Nu is punched in the stomach once more. Omega then lifts him up with only one hand. "No... Surely you're not the one sent by Alpha to kill me... You're too weak..." at this point, he is interrupted by a laser blast shot at him. He pulls Nu in front of him, using him as a shield. The blast hits Nu square in the stomach, fatally wounding him.</p>
<p>-Pi asks the other one once more if knows if Rho is still alive. The bandit panics and begs for forgiveness.</p>	<p>-Omega throws Nu's dying body down. Everyone looks towards the source of the laser, behind Omicron and Mu. It's Lambda, who can barely stand at this point from blood loss.</p>
<p>-Omicron promises he'll be allowed to live if he tells what he knows.</p>	<p>-Omega struts closer to the mute and summons his weapon, a very large Zweihänder Sword.</p>
<p>-The last bandit spills the beans and states that this "Rho" is going to be killed in the middle of town sometime later today as a testament of the bandits' power of the village and to promote the idea that they are in control.</p>	<p>-Upon reaching him, he pauses for a moment, and makes a statement. With not even a hint of uncertainty in his voice, he says "Alpha sent you and you're here to kill me. Try and achieve your goal."</p>
<p>-Pi says that he believes him, before promptly cutting off his arm, which startles Omicron a bit.</p>	<p>-Rho and Pi draw their weapons ready for a fight. Omicron and Mu are still unsure what's going on.</p>
<p>-The bandits scream in pain as he calls Pi a liar. "I told you what you want! Why couldn't you just let me go?"</p>	<p>-Omega gazes into Lambda's glasses. "Come on now, you really expect me to believe you were trying to hit him with that blaster shot?"</p>
<p>-Pi smiles and says that "Omicron was the only one that promised that. Besides, you don't even exist."</p>	<p>-Lambda starts to shake his head no, then quickly aims the laser rifle at Omega. Omega swats this out of his hands and kicks him towards the ground. He then raises his sword and attempts to strike him.</p>
<p>-She then smashes his head in with her axe.</p>	<p>-Lambda quickly rolls out of the way and dashes over to Mu and summons a small laser pistol. He points it at her head and uses her as a shield. Mu begins to protest and is frozen with fear.</p>
<p>-She thanks Omicron for his help and indicates the correct way back to the village.</p>	<p>-Omega smiles briefly and looks towards the other three people, "anyone want to help solve this negative situation? Pi? Rho?" He pauses for a moment before glancing towards Omicron. "Omicron? Want to give this a shot?" Another brief pause. Omicron is unsure what to do, or how he can even help. Nu has stopped making pain noises and has finally died. "No? I guess that just leaves me, and my solution of choice...."</p>
<p>-The two walk for what seems for a long time, sharing the jug of water, fighting off more enemies and finally arrive at the outskirts of the desert Village of Polyammos. They then hide behind some rocks and prepare to fight.</p>	<p>-He glares towards Lambda. He raises his massive sword. "Violence!"</p>
<p>-The bandits have gathered all the villagers to the edge of town to watch</p>	

And finally, it should be noted that all of the level design for the Desert Zone and some of the Island Zone was created. However, the code and assets were not completed as that part of the story was eventually decided to not be included in the Final Version of this Project.



CHARACTER CREATION

June 28th, 2014 was the first recorded date I sat down at my desk and began to seriously think about what kind of characters I wanted to create to be a part of my new universe and story. Sure I already knew that I wanted at least the 24 individual testers to take part in this seemingly endless battle to the death while exploring a rich virtual world filling with Mythical and Robotic creatures, but other than that, what else did I know about them? Not a lot actually. I knew that scientists would be watching the characters progress through the different Zones, but who was their leader? What kind of person had he developed into after working on the project so long and still not satisfied with the results? What forms of A.I. in the game would be worth exploring as recurring characters, not just as a one-time boss? What information did we even need to have on each character? Many questions needed answered, which is why I began the process of creating and developing my characters very early in development.

Initially, I found that a large majority of characters I wanted to create to fit plot points and roles were terrible. I tried to elaborate on each of these characters' personalities and motivations, but could not get anything of merit that didn't seem really generic, or even worse, typical stereotypes. In order to correct this and give myself more insight on the subject, I looked up and researched websites that would help me fine tune my skills in this area. This led me down the path of two important philosophies in regards to developing my characters: Write what you know, and looking at a situation from another's perspective.

These concepts helped me greatly as I expanded upon each character. I knew that all of my main characters were going to be identified by code names, referring to their Greek symbol title, which reduced the need for any real name. Next, by looking up general information on each symbol such as design, the general information, trivia, historical usage, references, and purpose, I would be able to identify what kind of person I would want that character to be. Some symbols, had lots of helpful and relatable information that helped guide my decision quicker. Others, not as much, but I was able to fill in the gaps with my own ideas and logic. I took what I learned from this research and then, surprisingly, I opened my Facebook. I found friends and family I knew on there and began to apply them to the information I had gathered. I assigned two individuals to each Greek symbol that had similar personality traits and for a bit of variety. By doing this, I had discovered a great understanding of all my characters. I was writing what I knew (about my friends and family) and I could look at any potential situation from their perspective because the people I selected I've known for years. This method also had the added bonus of helping me write more believable dialogue for each character in the long run, as I can use my knowledge of the actual people and what they say and do to make it feel more realistic and less forced! It's no wonder plenty of writers do this when creating their content.

I began to draw up a chart in Microsoft Excel to better keep track of all the information I had learned about each character. I even was able to decide their class roles and signature weapons based off the minor fact of learning about the Greek symbols. Trying to decide each person's signature symbol and weapon took some time, as I wanted everyone to have a relevant one with no duplicates. It was important to me that my characters were well defined, not just ones with a few distinguishing characteristics. Jonathan Blow from the film *Indie Game: The Movie*, had a pretty good saying on the subject of character and personality in general. According to him, if you can't see a weakness or flaw in another person, you're probably not going to be able to connect with them or comprehend their motivations on a more involved level (Blow Jonathan, "Indie Game: The Movie"). I took this information to heart when considering some of my characters and their traits, I wanted all of them to have substantial vulnerabilities and imperfections. Not just the "bad" characters, but the "good" ones too. The terms of good and evil should be subjective and should be alterable when considering the concept of point of view. Having this thought in the back of my mind really made the difference on improving my characters to a higher level of realism and interest. I began to think about any other important main characters I wanted to include other than the 24 characters based of the Greek Alphabet Symbols. I had already established a professor character that was in charge of the Project's Comet development in the story, so I figured he should be listed. I also decided that he should have a daughter like figure in the form of another female colleague working with him on the project, as I thought it could make an interesting sub plot as well as expand upon real world characters in the story's universe. While searching for information about the different Greek Symbols, I would happen to find several other sections of symbols on the same page relating to other symbols. In particular, cosmic and space related symbols, which I thought really went with the whole theme of my title "Project Comet." Much to my surprise, there was indeed a comet symbol on the page, as well as Roman symbols for all the planets, and even more! This discovery and information actually spawned the second wave of the story that I mentioned above in the last section of this Thesis Document. After I used this new knowledge to expand the plot in an exciting and different way, I needed to create more characters to fill the roles that were needed in the story. By using the same method as before with these new symbols, I was able to give personalities to the other real world characters I just mentioned and several virtuous and helpful A.I. characters. Since the Project's name is Comet, I also decided to put in more antagonist A.I. into the mix when the stalemate event takes place in the game's story to add another threat for the player to overcome. The 10 new characters are all code-named after planets (including Pluto and Ceres) and play a very important role in the 2nd half of the story. Unfortunately, only a few of these characters will be appearing in this Thesis project itself, except for a brief cameo at each medium's end. However, I thought it was important to include all this extra work I did expanding the universe and creating a very long and complex story with a large cast of characters.

Here is the final Character Creation Chart I made of every “Main” character in the storyline.

Tech Username	Symbol	Color	Gender	RPG Class Role	Weapon Type	Affiliation	Alignment	Playable?
Alpha	α	Blue (0,0,255)	M	Crusader	Kopis Sword	Greek	Lawful Evil	No
Beta	β	Purple (128,0,128)	M	Berserker	Claymore Sword	Greek	Chaotic Evil	No
Gamma	γ	Turquoise (64,224,208)	F	Lancer	Lance	Greek	Chaotic Neutral	No
Delta	Δ	Yellow (255,255,0)	M	Wanderer	War Hammer	Greek	Neutral Good	No
Epsilon	ε	Emerald (80,200,120)	F	Priestess	War Fan	Greek	Lawful Good	Yes
Zeta	ζ	Crimson (220,20,60)	M	Warlock	Scythe	Greek	Chaotic Neutral	Yes
Eta	η	Beige (245,245,220)	F	Summoner	Nunchucks	Greek	Lawful Neutral	Yes
Theta	Θ	Green (0,128,0)	F	Enchanter	Magic Rod	Greek	Neutral Good	Yes
Iota	ι	Tan (210,180,140)	F	Cleric	Staff	Greek	Lawful Good	Yes
Kappa	κ	Orchid (218,112,214)	F	Slayer	Labry	Greek	Chaotic Neutral	No
Lambda	λ	Alloy (196,98,16)	M	Artificer	Crobar	Greek	Lawful Good	No
Mu	μ	Pink (255,192,203)	F	Whip Master	Whip	Greek	Truly Neutral	No
Nu	Ν	Arsenic (59,68,75)	M	Warrior	Great Knife	Greek	Chaotic Evil	No
Xi	Ξ	Maroon (128,0,0)	M	Ninja	Katana	Greek	Chaotic Good	No
Omicron	Ο	Orange (255,165,0)	M	Mage	Mace	Greek	Neutral Good	Yes
Pi	Π	Lemon (255,244,79)	F	Gladiator	Battle Axe	Greek	Lawful Neutral	Yes
Rho	ρ	Lime (0,255,0)	M	Rogue	Kukri	Greek	Truly Neutral	Yes
Sigma	Σ	Slate (72,61,139)	F	Archer	Bow	Greek	Chaotic Good	Yes
Tau	τ	Brown (165,42,42)	M	Monk	Tomahawks	Greek	Lawful Neutral	Yes
Upsilon	υ	Colbalt (0,71,171)	F	Black Belt	Brass Knuckles	Greek	Lawful Evil	Yes
Phi	φ	Indigo (75,0,130)	F	Illusionist	Claws	Greek	Neutral Evil	Yes
Chi	χ	Navy (0,0,128)	F	Vagabond	Hook Swords	Greek	Chaotic Good	No
Psi	ψ	Aqua (0,255,255)	M	Assassin	Sai	Greek	Truly Neutral	No
Omega	Ω	Red (255,0,0)	M	Knight	Zweihänder Sword	Greek	Neutral Evil	Yes
Mercury	♿	Pewter (144,146,125)	?	Bard	Harp	Planetiers	Chaotic Neutral	No
Venus	♀	Saffron (244,196,48)	F	Sorcerer	Pollaxe	Planetiers	Lawful Evil	No
Earth	♁	Lavender (230,230,250)	F	Scout	Short Sword	Planetiers	Truly Neutral	No
Mars	♂	Vermilion (217,96,59)	M	Spearmen	Spear	Planetiers	Chaotic Evil	No
Jupiter	♃	Cinnabar (227,66,52)	M	Pyromancer	Falchion	Planetiers	Neutral Evil	No
Saturn	♄	Viridian (64,130,109)	F	Necromancer	Scimitar	Planetiers	Chaotic Evil	No
Uranus	♅	Celadon (172,225,175)	F	Druid	Roman Scissor	Planetiers	Neutral Evil	No
Neptune	♆	Cerulean (42,82,190)	M	Shaman	Trident	Planetiers	Lawful Neutral	No
Pluto	♇	Fuchsia (255,0,255)	M	Shade	Sickle sword	Planetiers	Lawful Evil	No
Opposition	♁♃	White (255,255,255)	M	Sir Kurios	N/A	Astron Tech.	Truly Neutral	No
Conjunction	♁♄	Silver (192,192,192)	F	Lady Kiria	N/A	Astron Tech.	Neutral Good	No
STAR	★	White (255,255,255)	N/A	A.I. Instructor	N/A	Astron Tech.	Truly Neutral	No
Comet	♁☄	Silver (192,192,192)	N/A	A.I. Admin	N/A	Astron Tech.	Lawful Good	No
Ceres	♁♀	Blood Red (138,7,7)	?	The Creature	N/A	Astron Tech.	Chaotic Evil	No

Once I had the completed list of characters, which took several months of off-and-on work, the next step was to illustrate the characters. In particular, drawing some character sketches of characters that were going to be a part of the limited storyline found in this Thesis, as I had already determined by that point in time that I wasn't going to be able to complete a

vast majority of the full storyline. A wild diversity of draws were made in multiple styles, but once I decided on an Adobe Illustrator/Flash stylized look with thick black outlines, I began to make some final sketches on paper. These Character Drawings, such as the ones you see below, were some of the final ones made for this project.



Often, characters would have to be drawn multiple times before I was happy of the appearance that I had given them. Through much of my research it's seems that this is very common, as character concept changes can vary between artists that attempt to create a design that they have been assigned to do. Often, they use reference materials to craft their work. In this case, actual people that embody the virtues and traits that the character concept has laid as foundation for my final results. Not only did I pick up the individual's personalities for each character, but I also used their physical appearances as inspiration. As I stated above, many characters are directly related to people I know. Imagining parallels to their features and personalities often helped give inspiration for my drawings. Many of the final designs combined multiple people appearances in order to achieve this goal. This resulted in some interesting looks, as the physical appearances of the influential personalities often were quite different. Sadly, many pieces of this character artwork never got fully digitized, but there are several examples of those that did in the Asset Replacing section further in this document.

WRITING A PLOT SYNOPSIS

Now that I had my setting, characters, and all the initial story development in my head, I needed to get it out on paper so that I could have a clear understanding of my thoughts and that other people could read it. The most obvious and easiest way of writing a plot synopsis that I could think of was using bullet points to quickly convey all the important details and move quickly from moment to moment. This went well initially, while I attempted to explain everything that happened in the prologue. Then, upon finishing this first section, I went back to what I had wrote. This part was discouraging, as I had left out too much information in order for effective time management and the short bullet points were too choppy. I needed a new method or inspiration in order to get this piece out. I knew it was mostly going to be for my benefit, but this plot summery was a key point in shaping both mediums I had chosen. After a week of no success, I began to look at a few summaries of books, movie scripts, and plays that were all available online. Noticing that these used full sentences to achieve what I seemingly could not do with my short bullet points, I considered them to be a possible solution and I would finally have a way to crank out the story in detail. I began to rewrite the section using this method, hoping that it would flesh out what information I had left out using bullet points. Unfortunately, this also failed, as the summaries of books and films are just the skeletal structure of the plot, linking only the most important events in order for compact reading in a very short time span. This version of the plot synopsis was even shorter to allow for all the proper sentences. A summary and an outline synopsis were not the same. I had been doing it all wrong from the get go. I needed a script before I could write my story out. Then if I needed or wanted, I could write a brief summary. So I did the only thing I could think to achieve this for myself, I took my original bullet points and expanded them to complete sentences.

It effectively conveyed important information in short bursts, and I was able to include more detail that made it easier to read and understand from a personal and a professional standpoint. It did take a great deal longer, and some bullet points contained multiple sentences, but the outcome was gratifying. This attempt to combine both bullet points and a full sentence summary was a bit unorthodox, but it helped me to start enjoying the writing process, including examples of foreshadowing and symbolisms. In the end, the outline ended up being much longer than the actual story presented in the two mediums, but as I've said before, this was expected and intended. Nearly 10,000 words making up a script outline means that there is plenty of content to discuss. There certainly is a world with rules and depth beyond my synopsis and story. There are even two fully mapped out chapters in my plot synopsis with locations, allies, and enemies, that didn't make it into the final product for this Thesis. I don't consider that a misstep. Instead, it is a stepping stone to take the project for future endeavors years from now. That was something I set out to create from the start and ended up also being something that I was pleased to achieve.

BASIC IMPLICATIONS TO RPG MAKER VX ACE

A large part of the initial development of this Thesis involved simple edits to the default engine. Not to be confused with custom scripts added, everything discussed in this section is editable through the engine itself with handy window called the Database. A variety of tabs in this window contain many of the basic elements of the game and allows the user to quickly edit them to his or her liking. These tabs included the following:

- Actors: the party members for the RPG
- Classes: the type of classification for each character
- Skills: abilities used by the character in exchange for Mind Power
- Items: list of objects that the player can find and use from their inventory
- Weapons: list of offensive increasing gear the player can find
- Armors: list of defensive gear the player can find
- Enemies: all foes found in the game
- Troops: controls what kind of enemies can appear at the same time
- States: status effects that can hurt or benefit the player's characters or enemies
- Animations: displays whenever a skill is used
- Tilesets: control the map sprites that make up the story's world
- Common Events: list of specific code that is always active
- System: list of general settings for the engine
- Terms: allows the words of certain variables and identifies to be displayed as different text

I am going to briefly go over each of these tabs and explain what was done in each of them that differs from the default experience and original settings found when I first opened RPG Maker VX Ace. If I mention a section, it means I edited it to make the engine change to my needs for the story and game's universe. However, I'm going to be omitting the Animations, Tilesets, and Common Events tabs as they are discussed more in-depth later in this document.

I. Actors and Classes

To begin with these sections includes all the playable characters found in the game as well as the classification of each character's role in the virtual environment featured in the story. For this thesis only two characters are playable, as the story does not allow more characters during the time spent in this project. However, all characters were added in a basic format with links to specific character classes that were decided during the character creation process. The only two that were really elaborated on was the playable characters, Omicron and Zeta. The general options found in the tabs for this included a customized nickname that was a perfect place for their Greek symbols, the initial level for the character and the starting equipment found on the character when the game is first begun. The

classes page consists of special parameters including what skills the character can use and learn as they level up, what items, weapons, and armors they can use, and specific curves for how their stats are increased as they gain experience. All of these were changed to reflect the items found in the game's world and the actual character builds, resulting in unique character statistics for them both.

II. Skills

The skills section is mostly about the abilities of the characters that the player can have in the party. All of the general settings about the attacks can be found here including the type of the attack, attack descriptions, the attacks' mind power cost, what message displays when used, any kind of special effects such as chance of inflicting status ailments, and the actual mathematical formula for the attack and how the final damage is calculated. All special enemy attacks are also featured in this section contain the same general settings.

The screenshot shows a software interface titled 'Database' with a menu bar containing 'Actors', 'Classes', 'Skills', 'Items', 'Weapons', 'Armors', 'Enemies', 'Troops', 'States', 'Animations', 'Tilesets', 'Common Events', 'System', and 'Terms'. The 'Skills' section is active, displaying a list of skills on the left and configuration options for 'Scorchng Swing' on the right.

Skills List:

- 149:Electric Surge
- 150:Sneaky Speed
- 151:Summon Arrows
- 152:Confusion Spell
- 153:Focused Arrows
- 154:Scorchng Swing
- 155:Paralyze Spell
- 156:Reboot Spell
- 157:Iced Arrow
- 158:Life Drain
- 159:Arrow Storm
- 160:Scratching Attack
- 161:Double Kick Attack
- 162:Biting Attack
- 163:Powerful Claw Slash
- 164:Sweep Kick
- 165:Smashing Blow
- 166:Thunder Vines
- 167:Sing Lullaby
- 168:Berserker's Roar
- 169:War Chant
- 170:Absorb Sunlight
- 171:Healing Spell
- 172:Drink's a Elixir
- 173:Magic Reflect
- 174:Sleepy Cloud
- 175:Poison Cloud
- 176:Fire Breath
- 177:Cast Spark
- 178:Rock Throw
- 179:Sword Slam
- 180:Giant's Rampage
- 181:Stares Blankly
- 182:Drools
- 183:Attempted Headbutt

General Settings:

- Name: Scorchng Swing
- Icon:
- Description: An large fire-based attack against all enemies.
- Skill Type: Magic
- MP Cost: 18
- TP Cost: 0
- Scope: All Enemies
- Occasion: Only in Battle

Damage:

- Type: HP Damage
- Element: Fire
- Formula: $a.atk * 2 - b.def * 2$
- Variance: 25
- Critical: No
- Quick... button

Invocation:

- Speed: 0
- Success %: 100
- Repeats: 1
- TP Gain: 0
- Hit Type: Physical Attack
- Animation: 008:Slash Fire

Using Message:

- (User Name) takes a massive swing with his Scyth
- Buttons: "casts *!", "does *!", "uses *!"

Required Weapon:

- Weapon Type 1: Scythe
- Weapon Type 2: None

Effects:

Kind	Content
Add State	Normal Attack 100%

Note:

Buttons: OK, Cancel, Apply

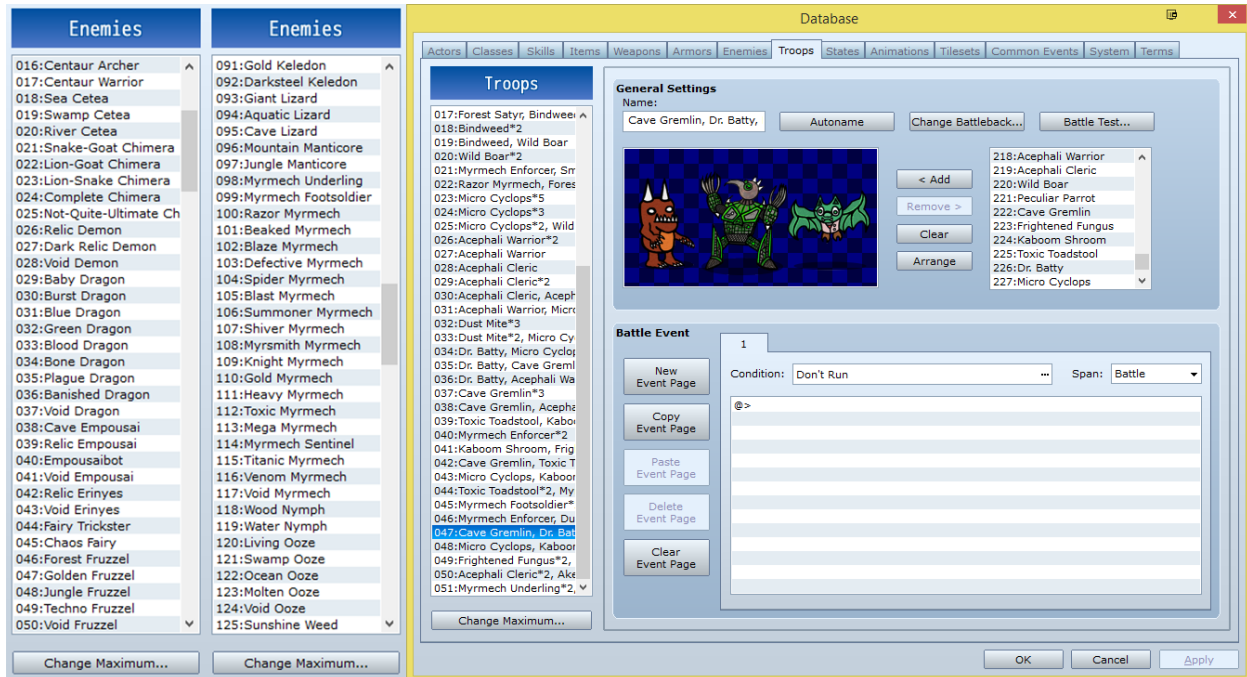
III. Items, Weapons, and Armor

The Item, Weapons, and Armors sections do exactly what is expected of them, they contain lists of all items, weapons, and armors found in the game. These sections include all the coding that makes each item do unique things when activated in battle or on the field, such as the health canisters restoring health to the characters or an Ice cartridge being able to do Ice damage to an enemy. This same goes for all the weapons and armors. In those tabs, it specifically shows the actual modifiers to stats when the equipment is being used by a character. Key items are also listed in the Items tab and are given a unique classification.

IV. Enemies and Troops

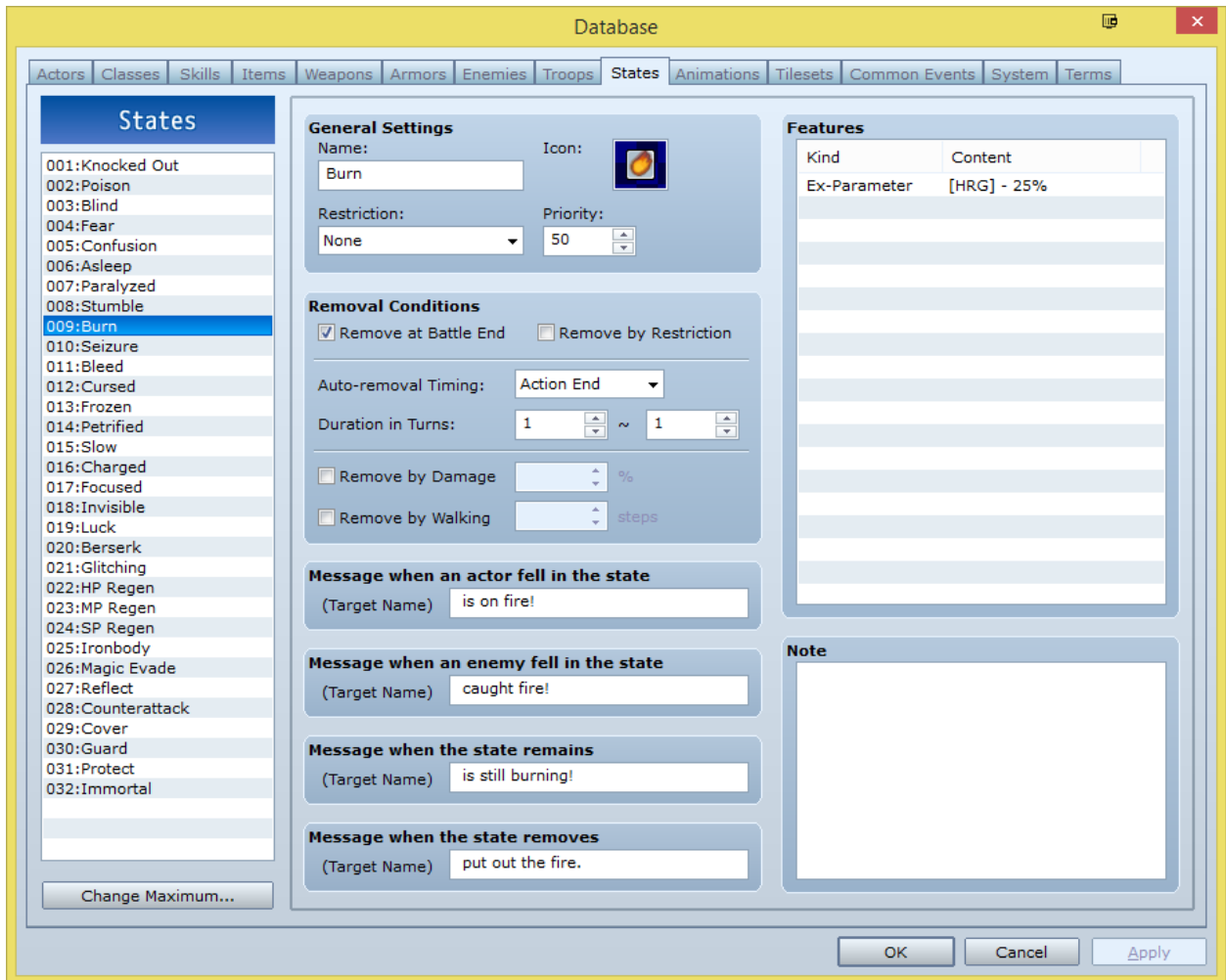
These sections contain all of the enemies present in the game, as well as their stats such as health, abilities and special attacks they can perform, and what kinds of enemies can be found at the same time, known as "Troops." During the story creation process, I made use of my research and began making an enemy list and looking into boss ideas. Greek and Roman Mythology was used as a base for many of the original enemy types, such as Forest Satyrs, Cyclops, and Acephali. The No Twinkie Database from my research really helped in providing a lot of general advice in regard to enemy's and what moves to assign each of them. According to their website, boss battles or mini-boss battles should be built upon what the player already knows from earlier parts of the game, instead of that knowledge being thrown out and being replaced with new mechanics or concepts (Adams Ernest, "The No Twinkie Database"). This was taken into consideration when creating the two mini-boss battles for the game version of the Thesis, by essentially making them harder versions of previously fought enemies. This worked well because it's the beginning of the game, so the first expansion should be simple! Of course, I wanted to include some original enemies that were influenced by other factors, such as other games, media, and my own creative ideas. Once I determined that the lore in the game resulted in the development of intentionally incorrect enemies being added to the virtual reality simulation, I focused more on custom made creatures including Myrmeches and Fruzzels. After finishing a complete Enemy List that featured around 200 different enemies, they were all separated by species (around 45 different kinds) and in alphabetical order in a list outside of game. Then began the long process of adding all their IDs in the game. This took even longer because of a problem with the premade enemies when I changed their IDs. The result created invisible enemies that still battled but had no names displayed. I fixed the issue by setting all the default enemies to the last IDs on the master list. Then I changed the enemies in each Troop to reflect the new IDs. This was just time consuming and tedious as adding all the ID and names initially. Even something as simple as typing all the names of the enemies into the IDs took around two days of work. I had to go back and change several names as some were misspelled initially. Sadly, a majority of the enemies and bosses had to be cut because of the short length

of the Thesis Project when compared to the entirety of the proposed full storyline. My method for doing this consisted of planning out which enemies best fit the areas that were going to be a part of the beginning of the story, and cutting all other enemies. Only the enemies and bosses on this list ended up moving to the step that involved planning their attacks and stats.



V. States

The Status condition list was one of the first things changed in the game's engine really early in development. Some states were inspired from other RPG's like the classics poison, burn, sleep, etc. I used knowledge from experience, research, ideas, and other games to create a full list of Battle Status Effects. Effects were designed to be both hurtful and helpful, that ranged from useful to the player, challenging to the player, easy to remove effects, brutal effects that the player wants to avoid, and some unique effects. Many effects that I created, such as the unique one: "Glitching," were created to be used later after this Thesis project, as the storyline featured does not contain enemies that know how to inflict this kind of effect yet. However, all are fully functional and work in the game. However, this was not always the easiest task. While implementing some of the status effects into the game's engine, I encountered several major problems. These include effects activating at the wrong times, states not resulting in desired effect, and actual game crashing glitches. I looked at a few tutorials involving creating states in an attempt to learn how to fix my issues and after changing default IDs in other areas of the engine's code, I corrected all the issues with game crashing and activating states at wrong times.



VI. System and Terms

Last but not least we have the System and Terms tabs. The System tab allowed me to customize the menu for the in-game windows, the initial party of characters that would be present at the beginning of the game, title screen graphic change, music and sound effects that play during specific scenarios such as the title screen or when specific bits of code/events are activated. It also can control the players starting position and has an option for showing all members of the party in the field. The Terms tab more specifically relates to the general names of a variety of terms found in the game such as weapon types, skill classification, elemental types that show what enemies are weak to and what they can resist, armor classifications, equip slots, and, general commands found on the battle screen. Another change was the term for the money used in the game. It was changed to be called "Nomisma," which is the ancient and Modern Greek word for "currency," which was done early due to the Greek influences.

CUSTOM SCRIPTS

Unlike the basic implications to the database that I just discussed, which features the tools to customize the games content to cater more to the story you wish to create, custom scripts are quite a different feature that makes RPG Maker VX Ace quite unique. These scripts are made by the engine's community and are usually free to use, with creators often not even asking for credit unless the scripts are used for a commercial product. These scripts are large sections of code and are able to be implemented into your personal copy of the development program. Once implemented in, which is often as simple as copy and pasting the lines of code in the appropriate section, these custom scripts do actually what you expect, customize the engine and potentially the gameplay experience, as these scripts can do amazing things to the default engine, so much so, that you need some of them in order to optimize the engine. The main reason for incorporating them into my project and writing the multitude of information on them was to raise awareness as to the massive amount of time spent on the small things the scripts added to tell the ideal story experience.

I. Methods for Finding Potential Scripts

The very first day I attempted to start my search for custom scripts I almost immediately discovered a very massive "master" list of all notable RPG Maker VX Ace Scripts that had been developed over the course of the program's existence. I had a wide variety of mechanics that I wanted for the game specifically, but it occurred to me that anything that could potentially expand the engine, change the default look, and add features would be worth trying out. I was open to anything really, but I knew what I wanted the game to look like visually, with an Adobe Illustrator/Flash art style with hand drawn artwork with black outlines around basically everything. I wanted any scripts I could find that could remove default RPG Maker options that feature less of my intended look. The only requirement I valued above all else was trying to avoid scripts that cost money to use professionally, as some content creators did want a form of compensation. I avoided putting scripts and website links that demanded this into this Thesis Project. The Master Script list I was using fortunately highlighted a lot of content that was free to use. However, the process of going through and checking out the features of every script on this list took a very long time, as there were so many scripts on this page that I quickly lost count, but I can guarantee at least 500+ were personally examined by me during my research. Two full eight hour workdays of strictly looking at and gathering potential scripts past, and I had only gotten through the links that started with the letters A, B, and C. It ended up taking about eight full days of work to go through this whole list. I found every script that had implications that I had previously thought needed to be part of the game during the early development of the story, even picking up multiple scripts that achieved the same desired result, just in case. This master list wasn't the only place I searched for Custom Scripts. I spent several days also

googling ideas or mechanics that I wanted to see in the game, just to see if there is anything out there for that specific purpose. I found some possible scripts like an Enemy Bestiary, but was overall disappointed with this lackluster method.

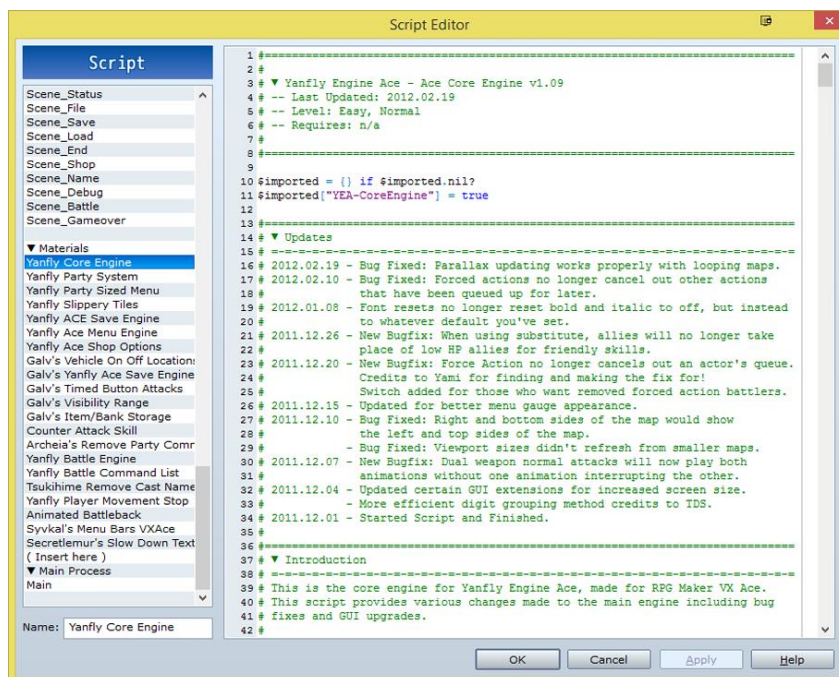
II. Core Engines and Learning which Scripts I could Use

Scripts are essentially huge sections of code, so something is bound to go wrong when they aren't integrated with the engine correctly. However, the scripts can potentially break the game themselves when don't work with one another. This can be caused by a variety of reasons, but the most common one was different scripts are created by different content creators. Because of how certain scripts and code is written by one creator, it could potentially damage another creator's script, ending in a broken mess that the developer using these scripts has to deal with. Often, there is not a fix for this without totally rewriting a custom script while taking into account the conflicting data from other scripts that need to be included.

So what's the solution? Mine involved smart planning, mostly in the department of keeping my scripts organized, switching out ones that proved to be incapable of working with one another. Even more critical, was when I discovered Core Engines. Several Scripts stood out in this Master list, many of these being "Core engines" with a large variety of expansion modules underneath. These custom scripts are massive, often some of the largest ones I found while searching. They are designed to make very big changes to the engine. Unlike other Custom Scripts, which more or less only add/remove features from the engine, Core Engine overwrite large sections of the default engine, optimizing and changing how the engine works, simply by being placed in the appropriate space. The expansion modules that come separately are additional little features made by the same programmer/content creator, so they are guaranteed to all work together with little or no issues. Throughout my early research, I found that one of the easiest and most developed Core Engines was called the Yanfly Core Engine. Fortunately, the master script list I found had some of the best script's this creator had created as add-ons, as well as giving me a link to his home website, which contained even more potential scripts. This made it easy to decide this would be my primary Core Engine. I found a variety of other Core Engines and scripts while going through the list, but most did not work with Yanfly's Core Engine or each other. Some notable examples I considered included Casper Gaming CSCA Core, Crystal Engine, and Kendrick's Core Script. This narrowed down my options quite extensively, but I made the right choice by picking something that was more manageable and had more information on it. I implemented Yanfly scripts in order to give the default engine the best stock upgrade possible as well as have more customizable options. Scripts that now are part of the engine include the Yanfly Core Engine (to run all other scripts), Battle Engine, New Party System, Menu Engine, Ace Items Engine, and Ace Save Engine. While it's not necessarily a Core Engine, it's worth mentioning that many of my other scripts were made by a

limited amount of actual coders, the most prominent one going by the username of Galv. His scripts that I used consist of mostly mechanics used in the demo I made early on, but would become features later in the development of this title once it is expanded.

After searching the RPG Maker VX Ace Master Script List and around the internet for a little more than a week, I had all the potential scripts that I felt like I needed. I had over 120 plus scripts all recorded and saved onto my computer. Many scripts had been designed by different coders, but added the same functions. This was done so I could have backup plans if one didn't work with the Core Engines I had selected. I figured only 15-30 will actually make it into the game, maybe less if the storyline didn't need specific bits of code yet. Pictured below is all of the scripts that made it into the final version of the game, allowing me to implement things such as improved battle mechanics, enhanced save features, additional attack options, player and party control during events, and general improvements for text speed, menu displays, images of characters during battle, and alterations to default visuals. There were 21 in total, a far cry from the original 100+ I had considered! The right side of the image shows just how large the Yanfly Core Engine really is. Also notice how the materials tab on the left, the custom scripts are in a specific order, as some Yanfly Scripts are not together with the others. This was done to fix compatibility issues, as things further down on the list can potentially override previous information. That's the main reason custom scripts work to begin with! I should also note that all scripts used in this project were free to use according to the owner's website that housed each script. I was very cautious in using content unless I found proof on their website that the Custom Scripts were Free to use. Many of the script developers did not even ask for credit. Several of them requested a free copy of the game if it's being sold commercially, but this project will need much more development before it is ready.



III. Customizing Custom Scripts

The final list of scripts I just showed you didn't happen overnight. The process for putting them all into the engine and testing them to see if the game didn't just crash from game being launched. After several weeks of putting all the scripts in, I originally had about 35. Many of these were removed, due to reasons I'll talk about in the next section, but before I could fully considered every script "funny compatible," I had to me look into each one more in-depth to tweak cosmetic options. Many scripts, especially larger ones such as the Yanfly scripts, have a section towards the beginning that allows you to define variables and mess with settings. The options can range from something as simple as changing the viable words that appears during the functions application, to something a bit more complex such as sizing variables for displayed images, and even increasing the default size and resolution the game will be played in. Overall, there are too many individual examples to discuss, but it's important to mention how much work went into this as well. It's also the reason why certain scripts that didn't work with each other initially, became compatible with one another after I simply turned a few settings on or off.

IV. Sample Script Issue and Solution

Initially, I was going to fill this section of the document with a variety of small issues I was able to fix while adding Custom Scripts, usually by changing the script's order. But after I looked over my daily index log from this project, I knew I had to give a specific example that happened over the course of my process in detail. After typing this specific incident, which was one of the most prominent issues from my memory, the decision was made to only include the one in this document, as the one example spans nearly a whole page by itself and covers virtually every other issue. It is the best way to summarize my experience when dealing with fixing scripts that were creating problems within the engine or with what I wanted my game to consist of.

I had to correct an error within the Yanfly Engine. Another script I had already implemented was making it possible to have the main menu of commands on the battle screen be the only thing that pops up when selecting your attacks. Another menu usually precedes this main menu, called the party command. This was what I wanted and intended to change, as this first menu seemed pointless to me. However, by removing this menu through custom scripting, it caused a glitch that made the first character in the player's party to skip his turn. As this was a pretty terrible flaw in the game's combat system, I needed to get this fixed. After several hours or so of examining the code, I found a fix for this by messing with some options, only to discover a new error. Hitting the left arrow key in battle allows the player to change previous choices they have made with their party members, but hitting this enough times so that it goes all the way to the left during battle skips the entire party's turn. In the end, I succeeded by

commenting out huge section of code in the Battle Engine, making the code void. And yet, once again, a new error appeared. This one was not caused by my code changing, fortunately. Hitting the back key while the first member of the party was selected also caused all of their turns to be skipped completely. I began the very long process of trying to figure out the error that was plaguing the battle system. To break down the problem for research and recording purposes, this was the issue. Anytime a player would input the previous key during a battle, it's meant to take you back to the previous actor to re-select what they they're doing for the turn. However, the glitch happens when the player is at the very first actor and tries to go back further. This causes the battle engine to believe that all of the player's selections have already gone through and starts the turn. This is essentially give the enemies a free turn and is a very small, but game breaking glitch. The problem this all stems behind was the original party command window. I figured out that the previous command was trying to access this window that no longer existed and skipping the turn order because of it. Once I figured this out, it took probably around another 8 hours to go through all of the coding and scripts in the default engine and other custom scripts that I put in to find every instance of the party command window and comment it all out. Fortunately, once I started doing this, errors began popping up left and right, showing me where the other party command windows were within all the code. After all this was done, I had found the specific line that created this glitch. However, I wasn't sure how to fix the issue. I couldn't simply remove the line of code from the system because I would be removing the functionality of being able to go back and re-choose what your actors are doing during the turn. So after doing countless hours of digging and studying all of the scripts, I finally found part of a line of code from another Yanfly script that I was able to edit slightly and put into this section in the lines place. Now instead of going back to another nonexistent previous menu, the indicator stayed in place and made a buzzing sound effect to show that it's not possible to go back any further. A lengthy progress and explanation for such a small problem. This one little issue took a very long time to solve, but I did get plenty of experience while doing so. My research couldn't help me there, neither could anyone I knew. It took a lot of dedication and my own wit to come up with a solution for something that, wasn't necessary, I just simply wanted it to be optimized. The conclusion was a happy one. However, not every script that I tried to put into this project faired that well and some things simply did not work due to the system's limitations. The next section involves some of the more prominent examples of Custom Scripts that had to be removed. When cutting back on the amount of custom scripts that I was going to include, a really impactful comment made on the Website Final Boss Blues stuck with me. According to an article on there, is that a common mistake that amateur game designers make is to fill their RPG with an abundance of features, often producing counterproductive results that make the game too complicated and kill potential interest (Jason, Perry. "Final Boss Blues"). This advice helped me remove several features that I deemed unnecessary to improving the actual story telling qualities of the game as well as ones that did not work for one reason or another.

V. Pitfall: Scripts that didn't make the Cut

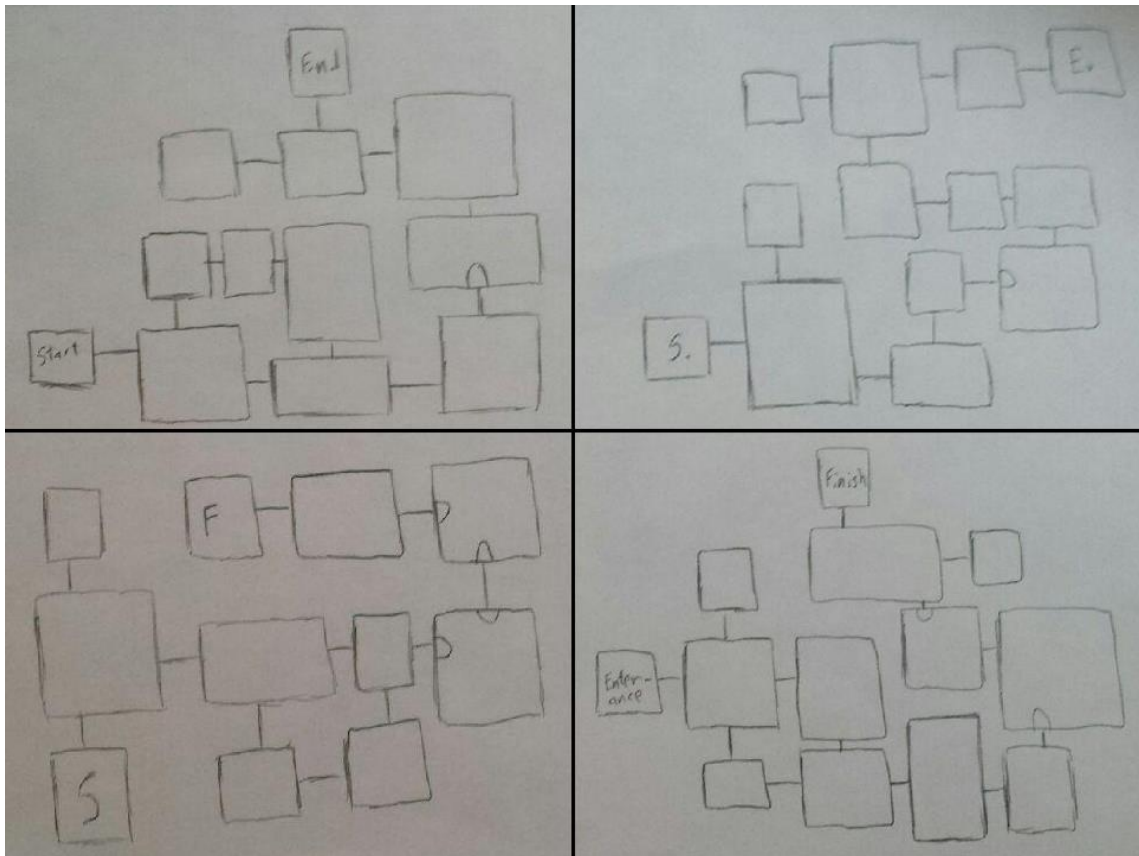
Scripting was one of the most challenging additions during the development of this Thesis. Even if these bits of code weren't created by me, they caused a great deal of frustration when things simply wouldn't work. This section is dedicated to a wide variety of scripts that were removed from my final list. There were numerous reasons that prevented them from functioning correctly or being a necessary edition to the game. First up, I added a simple steal command script to the game, allowing a character with this ability to steal items from enemies. After implementing it, I was able to give the skill by putting a bit of code in the character's notes section. This ability was supposed to be given to Rho, a character that was to appear in the Desert Zone, which was the next location after the Forest Zone. However, as the Desert Zone was not going to be a part of this Thesis Project, the script was removed shortly after this was determined. It wasn't necessary in the optimized version. The next removed script example was a Bestiary for in-game enemies. I spent a period of several days using different scripts to attempt to create a bestiary or list for enemies found in the game. This would be used by the player to look at enemies they have already fought, giving them detailed information on weaknesses, health, and special abilities. The problem was that none of these scripts would work. I tried three. One was incompatible with the Yanfly Engine, one simply didn't appear in the menus, and the last one crashed the game. The next Script I found was potentially one of the most interesting. I had found a script that allowed the player to move diagonally while pressing two movement keys. It really made it feel like the onscreen characters weren't restricted to a grid as badly. However, a major graphical glitch took place when this script was used, mostly because it's still in development. When moving downwards and diagonally, the player often clips through sprite tiles that are supposed to show up in front of the character. This ruins the illusion of perspective and depth, which immediately made me take it out of the game. Even some Yanfly Add-on Scripts were removed for different reasons. The most notable examples were the Status Menu and Message Engine add-ons. Their only purpose was increasing the amount of information on the Status Menu and being able to change some font options such as where it's displayed, respectively. These scripts were removed for cosmetic reasons, as I felt their additional features caused more confusion than the defaults. Finally, I added a Custom Battle Encounter Text Script to the game. The idea was that every individual enemy type would have had their own unique line displayed when you begin a battle with them, as opposed to them all saying "emerged". After much experimentation using this script, I got this working. However, after the initial test, the script began to glitch, displaying the enemy's name and the custom text three or four times in a row. When multiple enemies attack at once, the result is a humorous one, as the text is displayed many times for every enemy on screen. This was the most bizarre bug that I had. Unfortunately, I was never able to find the reason for this happening, so the script had to be cut.

LEVEL DESIGN

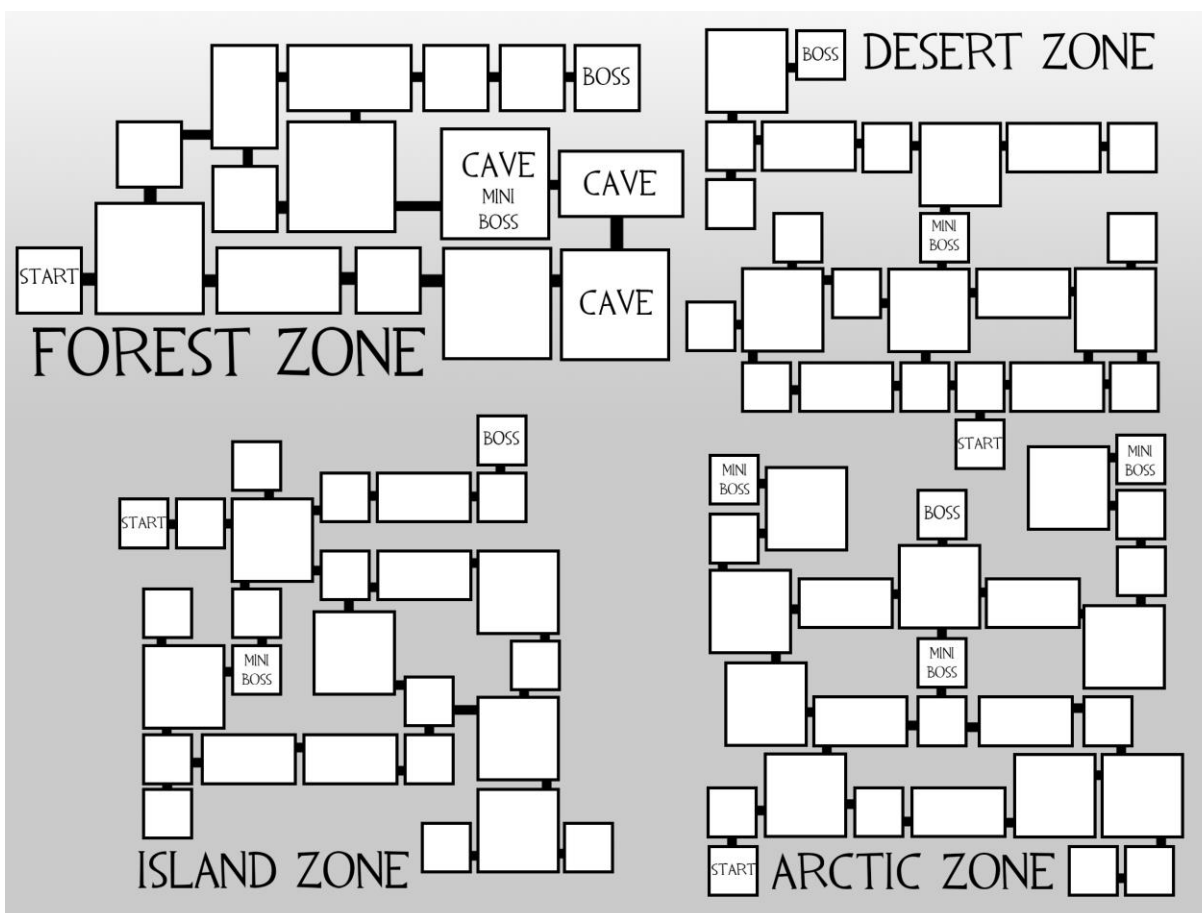
My Digital Media Portfolio is filled with various examples of 3D level design, placement, and environments. The position of environment artist or level designer has always interested me. So naturally, designing each area map the player could be in for this Thesis was a high priority on my list. So with a bit of experimentation and research, I began to experiment how the map editor worked. It took me awhile to realize how to use some of the default features. I learned about the different map types (field, exterior, interior, and dungeon) and noted that each had its own sprite sheets that would need to be replaced when I made my own graphics. I learned about certain tile properties that allowed them to be walked on, while others couldn't be passed through. Certain wall, land, and water pieces also could change how they looked based off how many other similar tiles of the same kind were placed near them. I didn't really use tutorials for this part of my process, I just wanted to learn on my own accord with experience crafting several different areas that didn't really have anything to do with my story. These few areas ended up being compiled with events and mechanics into my Demo map that I showed to my advisors. Despite that presentation being a setback, the Demo Map itself helped me learn about the engine before working on the proper areas set in the story's world.



The best way to explain this section would be to start at the very beginning of my process in making the main map portion for this Thesis project: The Forest Zone. First, I needed to do some rough sketching to plan out my map. The method was to draw every area as simple boxes, with just paper and pencil, connecting each one to the last in a fashion that made some coherent sense. Many RPG developers break up large locations into sub-areas, which is what I was trying to do to make coding easier and more organized. I had already completed the story synopsis by this time, so this was easy to do. The only areas I labeled in the stage was the beginning of the map and the end. I repeated this step many times for about an hour until I was happy with the general layout of 3 of the attempts that would help with the next step.

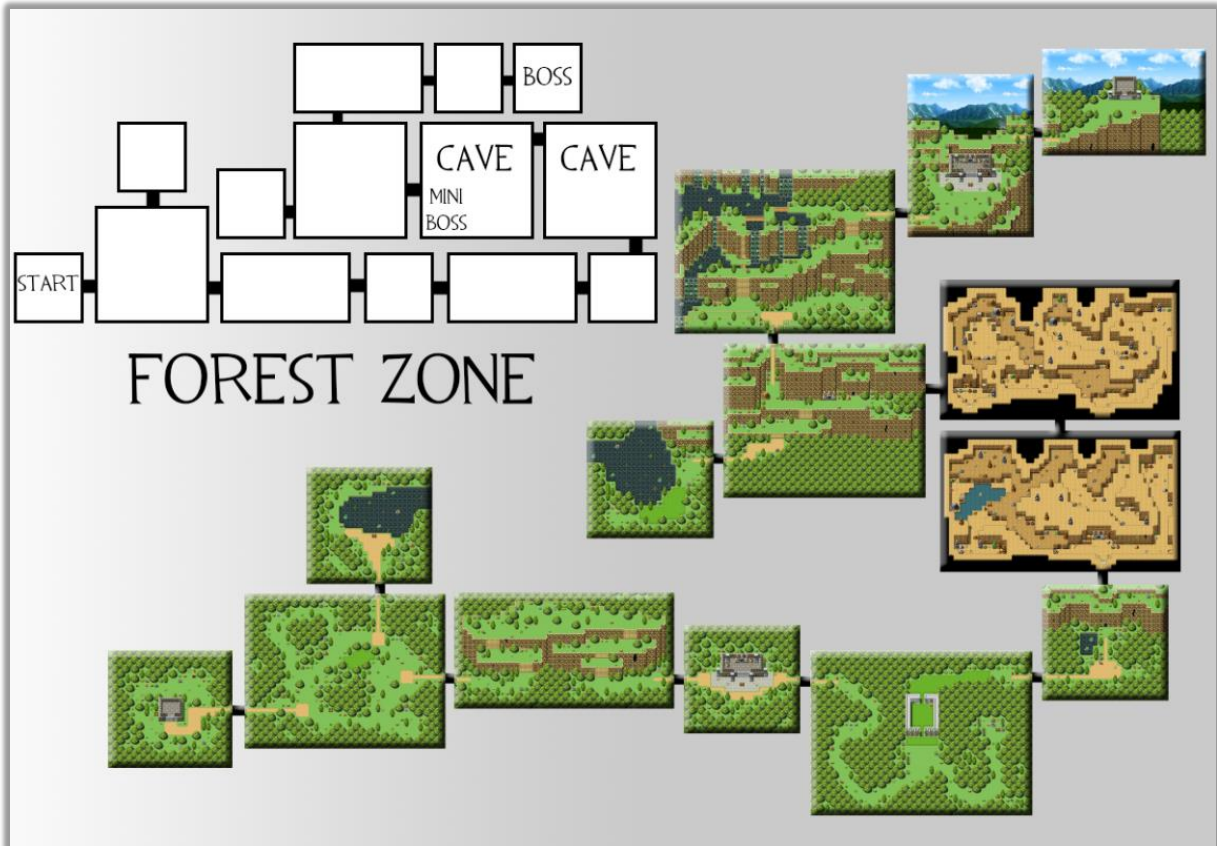


The next objective was to look at my drawings and make a simple version that combined elements of all three on the computer in Photoshop. This was done for easy access, record purposes, and to make any potential design changes easier. This time I paid more attention to the actual size and dimensions of each square (some rectangles) in order to make bigger distinctions between different sub areas. Once again, I labeled the beginning and the end of the map, but I also included a mid-point for a potential place for a mini-boss. I ended up producing several versions during this step too, but ended up finalizing a concept. Another interesting fact is that several other Zones from the extended story made it to this stage of development too! These areas were being designed to be larger and increasing in difficulty.



Next, I attempted to figure out which story events were going to take place in each area. Does something major happen? How about something minor that builds a character's personality? Will a cut scene take place? Will a fight take place here? Every detail such as this became critical. I'm grateful that I had read some of the game design books that I did during my research, because that helped me make an outline of all important story events early on. That helped the pacing of the game in the long run. Several areas were changed in shape and a few areas were moved around to better suit the needs of the story. Some distinctions were made like identifying what sub-areas would be a part of the cave, as well as trying to line up where the terrain should be more mountain-like and other parts that were close to the river. From the story. If anything, this helps the terrain feel more believable and intelligible between sub-areas, like they are actually connected. I also added a few optional areas to the layout of boxes, because no RPG would be complete without some helpful hidden items tucked away in optional areas. Players know that areas like these take extra time, but are rewarded for their dedication and sense of adventure. I then began the long task of creating the maps with the premade default sprites that came with the engine. They certainly played a part in influencing what the environment looks like, but I made some alterations of my own, planning on using certain

sprites as placeholders until I could bring in my own assets that dynamically changed the sprite in question. Some larger areas were given multiple routes to reach the next area. Nothing complicated of course, but this did add variation and more opportunities for the player to explore. Here we can see a final layout of the entire Forest Zone compared to the final mock up version done in Photoshop. Notice how a few more changes were made because of in game factors, but it's almost the exact same design! My only regret involving level design is one that I have mentioned already. I'm referring to the fact that I have other Zones mapped out in the same way, with large sections of story areas already created and functional in the engine that didn't make it into this Thesis Project, most notably the few remaining Forest Zone Areas after the Cave and the Entire Desert Zone. Regardless, it's important to look back with satisfaction at how far I came in terms of Level Design for this project by examining the stages of my process.



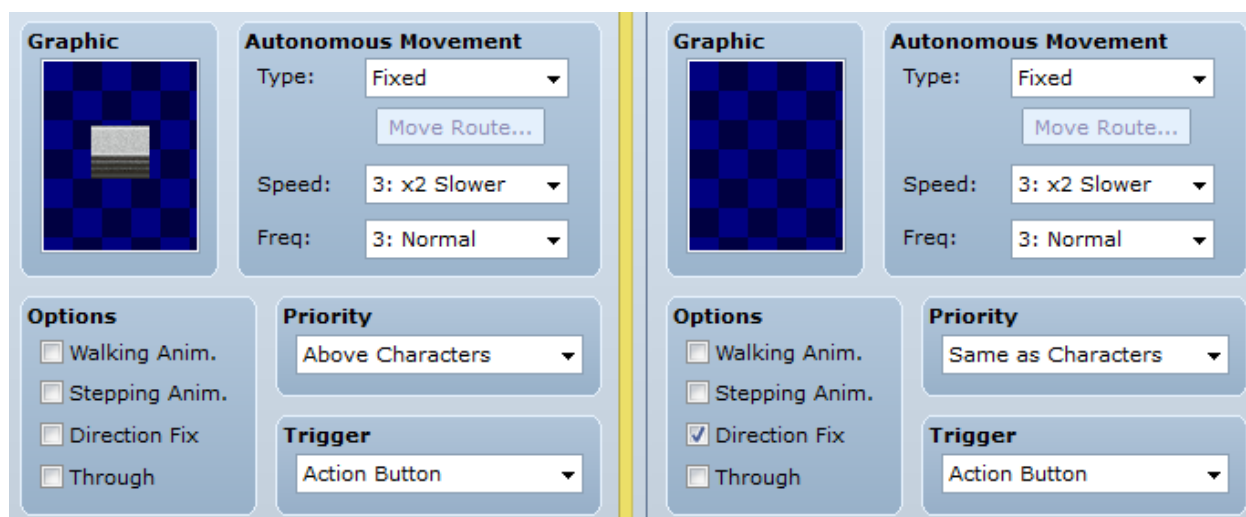
CODING EVENTS

A large part of designing this Thesis or any game in general is all the coding in it that controls all basic functions of the game. In the RPG Maker VX Ace engine, this code is referring to common events and specific events. These differ from the Custom Scripts Section I have already mentioned. Those scripts added more functionality and options into the game, but the events are the actual use of the code to add actions to the game that develops the story. Events are the controlling factor of a majority of the game, from plot points, NPCs, opening treasure chests, and even allowing you're characters to speak! Needless to say, they were essential for my Thesis development and the game would not exist without them. From a coding standpoint, events are fairly easy to set up in RPG Maker VX Ace. The interface is set up to consist of primarily visual coding, much like Unreal Engine 4's Visual System for adding this kind of interaction. After the visual options are selected, the information is converted to more typical line based coding, which is also visible. By selecting from a wide variety of coding types, presets, and options, I was able to code together the sequences that mad up a vast majority of events and gameplay. More often than not, I was highly successful in crafting this content to convey my story. As there were hundreds of events coded for this project, with each potentially have hundreds of individual commands in each one, this section is dedicated to a few examples showcasing noteworthy repeated events and the many pitfalls that I overcame in this area. Observe the screenshot from the game editor below and notice all the little grey transparent squares. In actuality, those are all events that serve different purposes. This section of the document is devoted to briefly show a few specific event examples from this area and explain how each one works and does what it's supposed to accomplish.

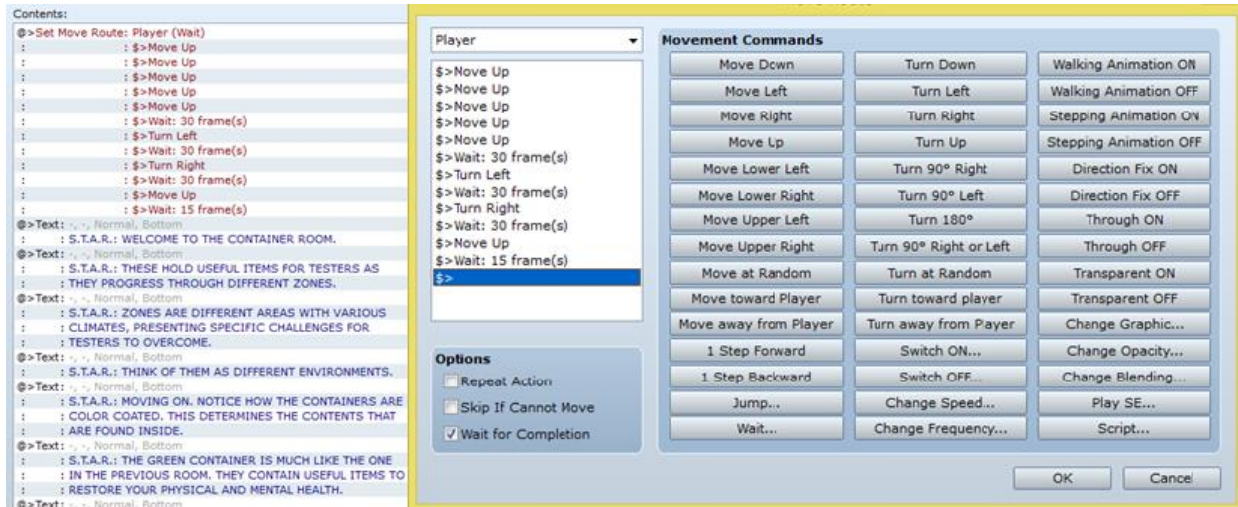


I. Specific Events

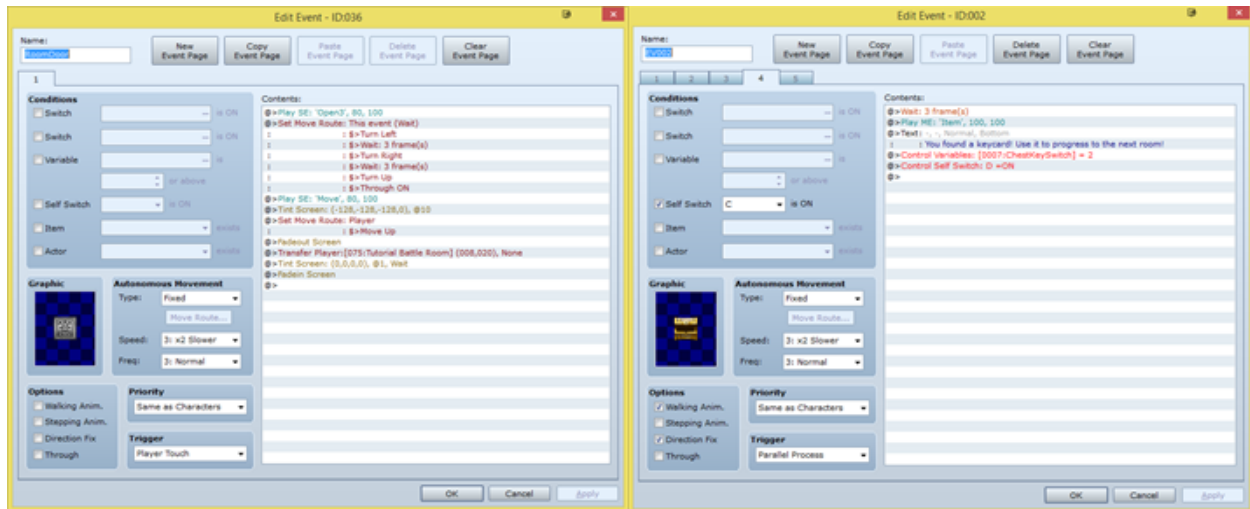
Though there are many events in the image on the previous page, many were duplicated to serve a similar purpose. Some of the ones on the sides exist to prevent the player from passing over certain tiles that are meant to be above the player's current height. These are left blank and have no graphic so the tile underneath can be seen. Other events, like the support beams that connect some of the vertical columns have a graphic for aesthetic purposes. These events are set to be above the player's height, which allows the player to pass under them, creating an illusion that the structure is higher than the player in the room, giving it more depth. Both of these types of events don't require any lines of code actually. There is a convenient option built into the engine that allows this to happen, my job was to only identify and know what toggle to switch.



Not every event is that simple, of course. Other events are slightly more complicated with several types of functionality. For example, the images on the following page refer to another event that involves the movement of a NPC, as well as dialogue that displays itself onto the screen shortly after on a timer. These sections, while not hard to program, were the most plentiful, and quite time consuming when thinking about every little aspect and action that needs to take place to progress the plot. The commands them self are controlled through the engine's coding system, which, as you can see, shows a variety of buttons with a brief description on the kind of code they can generate for your use. It was important for me to try and offer some variety between NPC movement and dialogue boxes, in order to break up speech in the game and avoid walls of text that would become boring for the player to read.



Continuing with the trend of explaining more and more complex events, the events that control the treasure containers scattered throughout the game had a lot a lot of work put into them. These events contain integrated animation, as well as displaying a message, a sound effect, and awards the player a variety of items depending on the color of the container. The animation that shows the container opening is controlled through event pages, a way to make an event scroll through several images once it's activated. The different pages are controlled by variables activating self-switches, which meets the property of conditions, thus moving onto the next event page. It's worth noting that I experienced a brief complication with these event pages, as you need to add an extra event page at the end of the sequence in order for the process to not repeat forever. Another mistake involve not setting the Trigger to Parallel Process, which is needed to flip through different event pages. I did not do either for the first couple of events, resulting in game breaking glitches. Fortunately, I quickly figured this out. The sound effect and messages are called through content commands, much like earlier events. Awarding the player currency, new items, a key item, or virtual armor is a critical part of any RPG when they open a chest. These options were very easy to implement as well, just took some time to figure out that there were content commands to add money to the player's total amount, or put new items in their inventory. In fact, setting up the four different chests was even more manageable, as I only had to set up one, then change its color and what item the player received. A vast majority of content in this engine is really easy to set up. It just took some time to figure out what was possible and where it was through research and experimentation. Early on in development, I had an alternate system of chest mechanics, but this method is more optimized via simple code instead of huge if/then statements that had to be created for the other version.

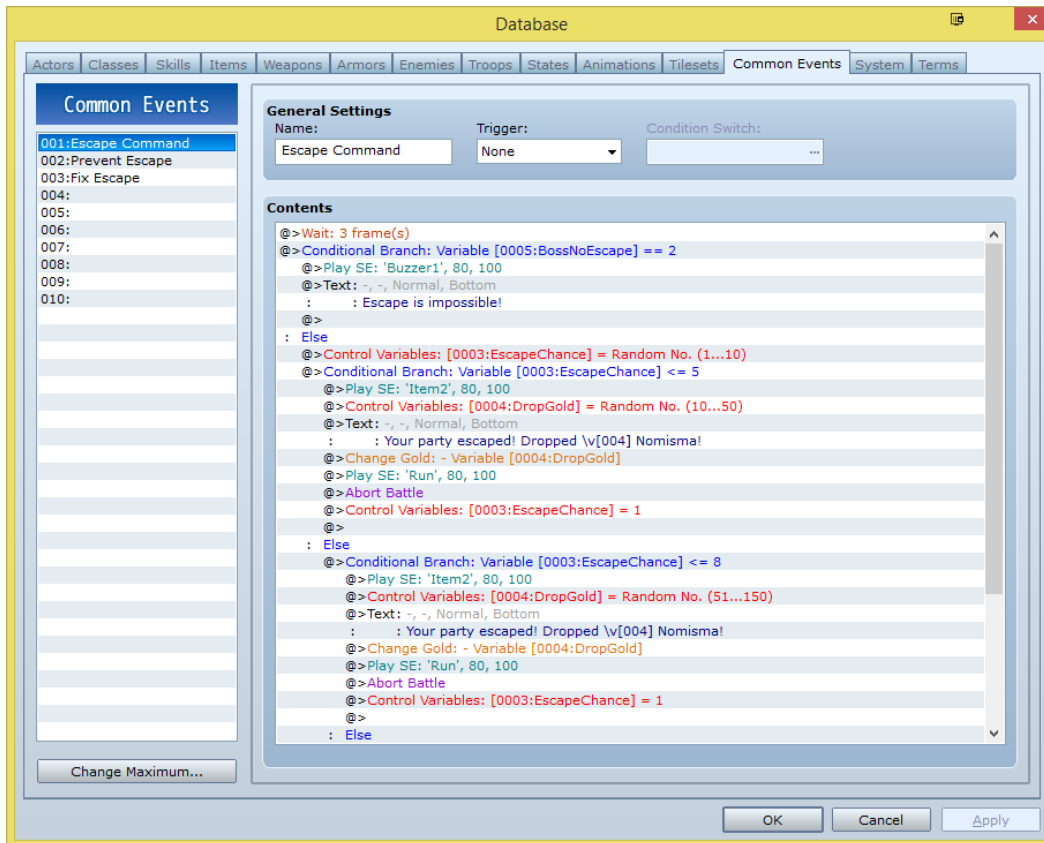


The door in the panel above picture also functioned in a similar way, using event pages, self-switches, and with the Trigger of being set to parallel process. This worked at first, but then I realized it had to be done a different way. This was due to the fact that the event needed to continue effecting the player briefly after the player went through the door. There are a few lines of code after this process that need to take place in the next map area the player has traveled to. This did not work with the old method. Not to mention that other areas feature Cutscenes that need to play immediately after entering them, or even possibly on a timed delay. Including all the code to do that in the same door event was the easiest method change I found for making an event start immediately after the player had entered the new area. It was often confusing at times to have to jump back and forth from maps in order to test if the code worked. Between that and testing it out in game, these transition events were often the largest in size and took the most amount of time to produce. Other than that, door events are fairly simple. Content commands could call fade-ins and fade-outs for the transition, movement commands could change the door's sprite without moving the graphic, a sound effect could be called at the appropriate time to make it more realistic, and a transport player command could be called on to move the player to the exact correct location on the next map.

That wraps up a variety of specific events that I crafted for this Thesis. Some transitional events that lead into a cutscene were massive, to the point where it would be impossible to even show a shortened version of how it was made and why it works. A great example of this would be the first boss fight that takes place in the story's prologue. The cutscene, all the dialogue, the fight, and the aftermath results all come from one giant event. In fact, depending on if the player wins that event or not, it changes the amount of extra content that the player gets to see. While I didn't have a lot of opportunities to intergrate things like that, as I wanted my story to stay true to the original idea, it's a nice mechanic to include for this Thesis, as it rewards the player for doing well.

II. Common Events

Many Events are only referenced and used once. Sometimes an event is duplicated so it can be used again for a short period before ending. Common Events are different from these, as they are always running while the game is being played. Think of them like background processes that run on the computer. They function as a semi-permanent form of scripting, with the added bonus of being able to be turned off and on at will in any area if need be and can even change or override base scripts. Naturally, I didn't need too many instances of this in my game, as it was only the first few areas. In particular, the main one I used was a common event that helped fix another issue for my battle system, the inability to properly run away from enemies. Not surprisingly, much like my earlier scripting problem, it originated from removing the party command window. This window was originally housed the escape option to run away from battle while in the game. I could not find a command to call this function back in the actor command menu because it lacked that kind of function after the window was removed for aesthetic and practical purposes. After searching for a solution for several hours with no results, I decided to try and create my own escape common event script that would run fulltime. The idea was to not fix the broken escape command that crashed the game, but to replace it with a custom command in the actor window that functioned similarly. After lots of effort on my part, I succeeded and now have a script of my own design that allows you to run from battle. By doing this, I was able to turn a very big problem into a feature! My custom script also includes the ability to call a variable to prevent the player from running during boss encounters or event fights with a special message. It also has the bonus chance of failing from getting away from the enemies occasionally, resulting in a loss of turn. Finally, if the player is able to get away they drop a random amount of currency, chosen from several different set variables. I could have made it truly random, as I initially had it, but because of changing it this way, I planned ahead if I ever need to expand on this game. This is because this common event is also controlled by where the player is in the game. This potentially means that future areas created farther in the game would make the player drop more money when running away. This also helps me implement a vital game design mechanic, pacing. Earlier areas in the game won't have as high of a chance to drop as much money and your chance to escape will be much higher. The assistance of this mechanic would progressively change to more difficult conditions as the player advances through the game. Again, a majority of that content did not and was not implemented, as this Thesis contained only the beginning of the game. However, it was important to me to be aware of the future and use my structural skills to develop this deliberate goal, much like a professional developer would.



III. Event Complications and finding Solutions

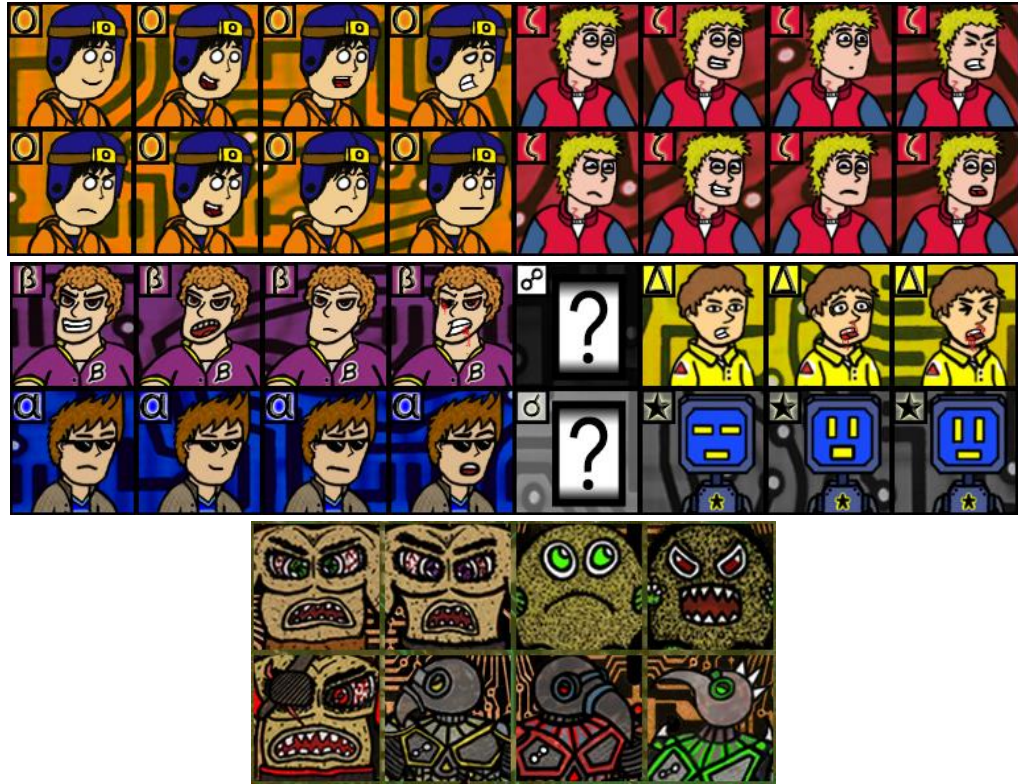
I've already talked a bit on specific examples of complications I had while working on events in the past two sections, but it's important to address this. Code is quite possibly one of the most fickle things when developing any kind of product of technology that depends on it to function properly. It should come as no surprise to find that many issues during the development of my Thesis stem from trying to code events. Many answers and solutions I found for my issues were from several of the forum websites or YouTube videos I have listed in my reference section of this document. Occasionally, I would identify a problem and be forced to find an answer for it myself, as I could find no suitable answers as to what I was trying to achieve. This usually resulted in spending several days on one issue. Overall, I was able to overcome any complication that presented itself. The only issue that's still partially in place now that the thesis is finished is that only the first party member can call for a retreat, and if he's unconscious you can't run away. I never found a direct fix for this issue, but I was able to maneuver around it, by taking into account story elements. Omicron is the main character and The Voice would not allow the other party members to leave him behind. The whole ordeal of coding created a negative situation and it took a lot of time, research, and creative problem solving like that to finish up the first version of the game.

REPLACING ASSETS

One of the biggest changes I made to the default RPG Maker VX Ace Engine was the asset replacing process. By default, the engine is filled with resources that game designers have complete freedom to use and build with. It was very handy for testing purposes, but I wanted my game to have a unique feel to it. Towards the very beginning of this project, I found several site/forum posts showing that RPG Maker VX Ace games are often too basic to be remotely successful. Many of these posts associate the problem with using the premade assets in a commercial game and that anyone can make a bad RPG with this software that lacks original content. So I decided very early on that I wanted to replace as much of the default content with my own ideas and graphics as possible. This wasn't a necessary decision, as the point of this Thesis was to just to test a story in the medium, but one that I felt needed to happen in order to display the story properly. Through my research, I had found several retail games made with the engine that relied heavily on the default assets such as *Undefeated* and *Victim of Xen*. My project could have easily done the same thing. However, because my process and project goal involved developing a game and story with as much control as possible and I wanted my game to have a stylized appearance from the beginning, it became apparent that it was a priority to make as much content that was my own that was possible in the time frame I had. Besides, many story elements would not have made sense with the defaults. Technology and futuristic items were a key part of the beginning of the story, and those are nowhere to be found in the default package of the games premade content.

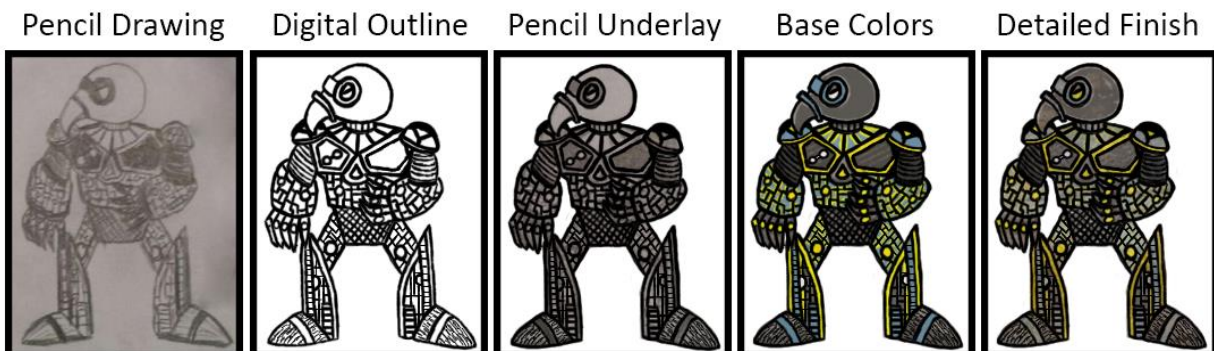
I. Characters Boxes

The asset replacing process had to start somewhere, and I decided that the graphics for all the characters in the game would be a good place to start. Considering that the demonstration for this Thesis would only feature two of the 24 main characters as playable characters, it did not take much for me to implement what I needed for each of them. Speech dialogue boxes showing a wide variety of emotion were needed so that the player could have a better understanding of what was happening in the story. A few of these could also function as their battle Icons and menu pictures. Once this was completed, the next step was to create equally detailed versions of these assets for any other NPCs that would appear on the world map. This included main characters such as Alpha and Beta, as well as enemies like Myrmeches and Acephali. This was done to give the game a more complete feel and so the player could have a visual representation of his or her enemies. A sprite sheet was also made for each character/enemy/npc to include movement and expression, but this was much too small to be the only identifier for this form of visual communication. These sprite sheets will be covered more in the animation section as they fit in better there.



II. Enemies Battle Graphics

Now that I had created all artwork that related to Map sprites, I needed to create artwork for all of the enemies they would encounter. I sorted through the massive library of creatures I had envisioned for the game, and selected the ones that made the most logical sense to appear in the areas that were featured at the beginning of the game. I was able to quickly create a wide variety using the process found in the image below. I'd first start with a few pencil sketch ideas until I considered one of them to be good enough to get into the Game. This drawing was scanned into the computer and I traced a digital outline over the image. Sometimes, minor design changes took place and corrections were made during this step. Once this was done, I would cut out the pencil drawing (which had a bit of extra detail) and place it under the finished outline. From there, I would paint simple colors using layers and the brush tool to form a base layer of color ideas. Finally, free to use textures were selected and taken from *CG Textures* and layered over various parts of the drawings to add an extra layer of detail, complexity, and color variance.



A majority of information that I found about the legendary creatures including some reference material for my drawings came from Greek lore involved a website called Bestiary - Monsters & Fabulous Creatures of Greek Myth & Legend. According to this website, Greek Mythology is filled with an abundant amount of creatures such as Acephali, Minotaur, Demons, Satyrs and more (Atsma Aaron, "Bestiary - Monsters & Fabulous Creatures of Greek Myth & Legend")! Many of these creatures made it into the library of my enemies are based off of Greek monsters that came from this Mythology, as the project has heavy Greek influences from the monster types, some locations, and the characters' names!



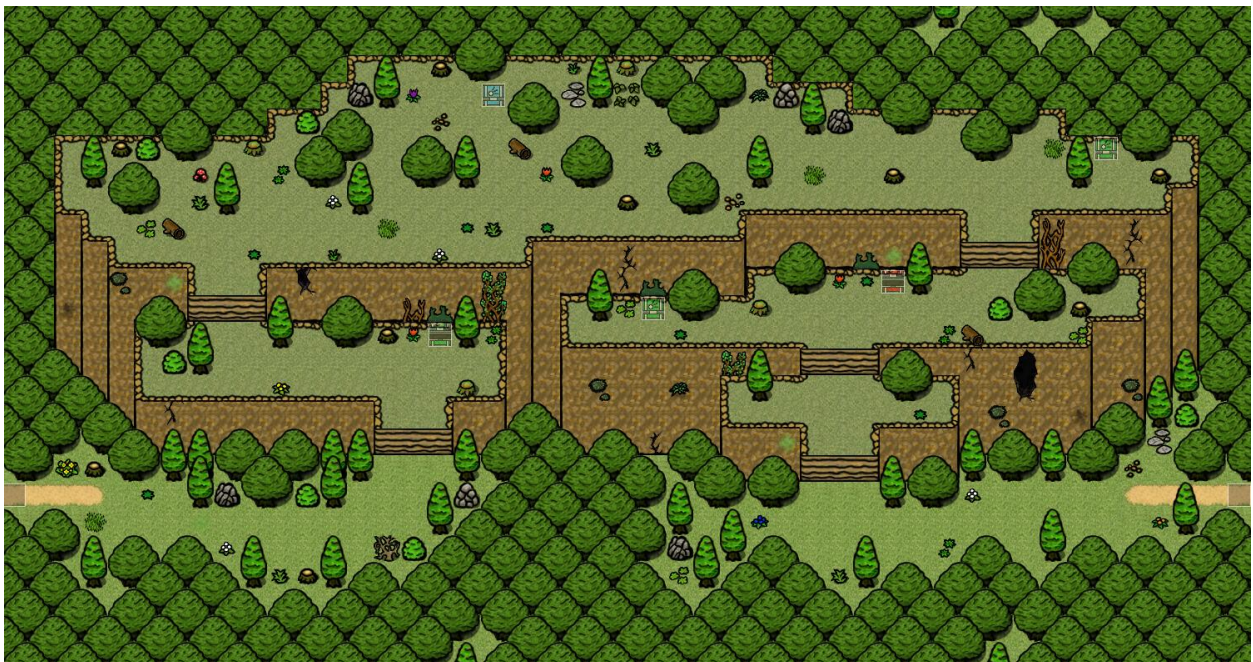
III. Mass Converting Default Sprite Sheets

After designing around 20 enemies, I then turned my attention to the creation of the actual sprites that made up the different levels and environments for the game. Earlier on, I discovered through my research that the default sprite sheets that come with RPG Maker VX Ace's engine can be exported and used as a template which allowed me to create all the environments early on with the presets. Then, it was a simple task to export all the sprite sheets that I used and converted all sections to my own style and graphics. Then all it took to replace the already placed graphics on maps was to change the sprite sheet they referenced from the defaults to my edits. There are a few examples on the next page that show that some sprites remained similar in design and idea, while others changed drastically to fit my story's universe. These edits, making up a majority, took triple the amount of time. A few errors took place during this period, mostly relating to certain new

sprites functioning incorrectly as the player could or could not pass through them. All known issues like this were fixed after playtesting, but I told testers to look for more bugs for future development



Featured below are a handful of both sprite types. These are only some of the hundreds of sprites I had to create or recreate over the course of this project.



IV. Battle Backgrounds

Early in development, I decided if it was possible to make animated backgrounds as opposed to stationary ones, I would accomplish it. This was inspired by the game *Earthbound* which featured similar battle backgrounds. Unfortunately, for a large majority of this project, I was unable to find a script that achieved this goal and I quickly learned that gif files are not supported by RPG Maker VX Ace. This meant I was going to have to draw backgrounds inspired by the game locations, but this wasn't something I was particularly excited about, as I had to change my initial concept due to technical limitations. However, during the last few weeks of development, by pure chance, I found a solution. While looking for *Earthbound* related apps on my cellphone, I found an app that took all the different backgrounds for the game and allowed the user to use them as animated cell backgrounds, complete with distortion effects. The cool thing was that the combinations of background effects consisted of many more than what was even possible in the game it was from! Thinking that this developer was interesting, I found a website version of the app online made by the same individual. Long story short, I was able to record the image sequences as they were posted as free to use under a general public license. I made sure to make combinations that weren't featured in the game and brought them into Photoshop for further editing with filters, distortion, color correction, and other factors to make them fit the theme of my game. After this, came the tedious process of making sure that the recorded animations looped correctly, which took several days. The reason that I put this much effort into making these backgrounds was to force myself to find a script that allowed them to be used, which was quite a method for motivation. Eventually, after several days of searching, I found a custom script that allowed for image sequences to be played in game, much like Adobe Premiere can turn image sequences into animation. I figured I would try a simple version of this method with an animation with about ten images, and it worked after around six tries, much to my relief! However, the backgrounds needed to be saved out as individual frames in order for this to work. Adobe Photoshop allowed me to do this quickly, but there was one flaw, every frame's name was slightly incorrect because the in-game custom script was very particular in this area or else it would not work correctly. This resulted in quite possibly the most tedious work process in the development of this Thesis: correctly labeling every individual frame of all 6 backgrounds featured in this first playable version of the game. This consisted of well of 400 images, and took several hours to complete. Finally, came the much more straightforward job of referencing these files after placing them within the game's library. A single code command was all that was required to take my massive work effort and getting it working in this game at this point. Below are screenshots of the Battle Screen before and after asset replacing was complete.



V. Other Miscellaneous Conversions

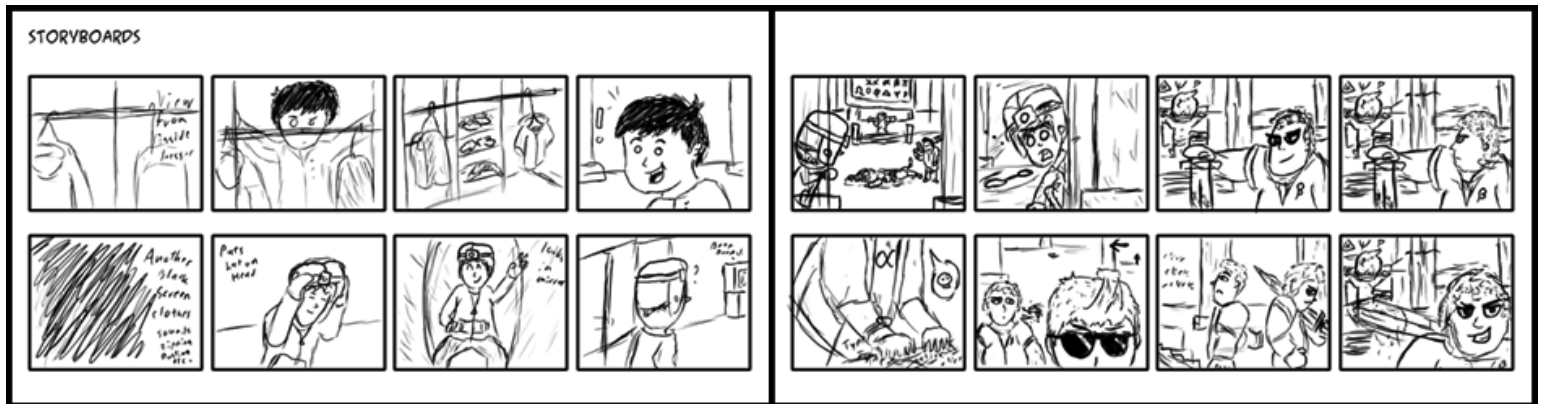
Another large edition to the default engine was a variety of custom music and sound effects I added. Early in development, I considered making my own music and sound effects, but quickly dismissed the idea, as plenty of quality sound files could be found online for free in public domains and under creative commons licenses. The area of interest in creating music and sounds was not present and I saved a great deal of time this way. Also on this list is the Title and Game over Screens. At one point, I wanted a game company logo before the title screen and some brief animation on both these screens, but I quickly removed this as I lacked the proper time to add this content. For a final version of the game outside of this project, this content would be nice editions. Other seemingly minor edits menu screen components, as well as all status ailment symbols, armor, and weapon graphics. A majority of these were just the default sprites redone in my style, as the time it would have taken to recreate these hundreds of objects from scratch would have exceeded the time given for this Thesis. However, these minor edits took time, and it's the little details like that give the refurbished style a more finalized feel!



ANIMATION CONCEPTS

I. Pitfall: Adobe Flash Animation Ideas/Storyboards

Early in development, I had planned for the game project to have Cutscenes with full animations to help drive the plot forward and provide visuals that were much larger and detailed than the in-game sprites. I had worked previously in Adobe Flash with abundant success, and wanted to use those talents while making assets for this project. Again, the Art style was inspired by Adobe Flash/Illustrator styled drawings. These Cutscenes were also going to be in the scrapped “Interactive Experience” that was under development for a brief time. Some storyboards were even produced to help decide what scenes needed to be created and how to plan the animation.

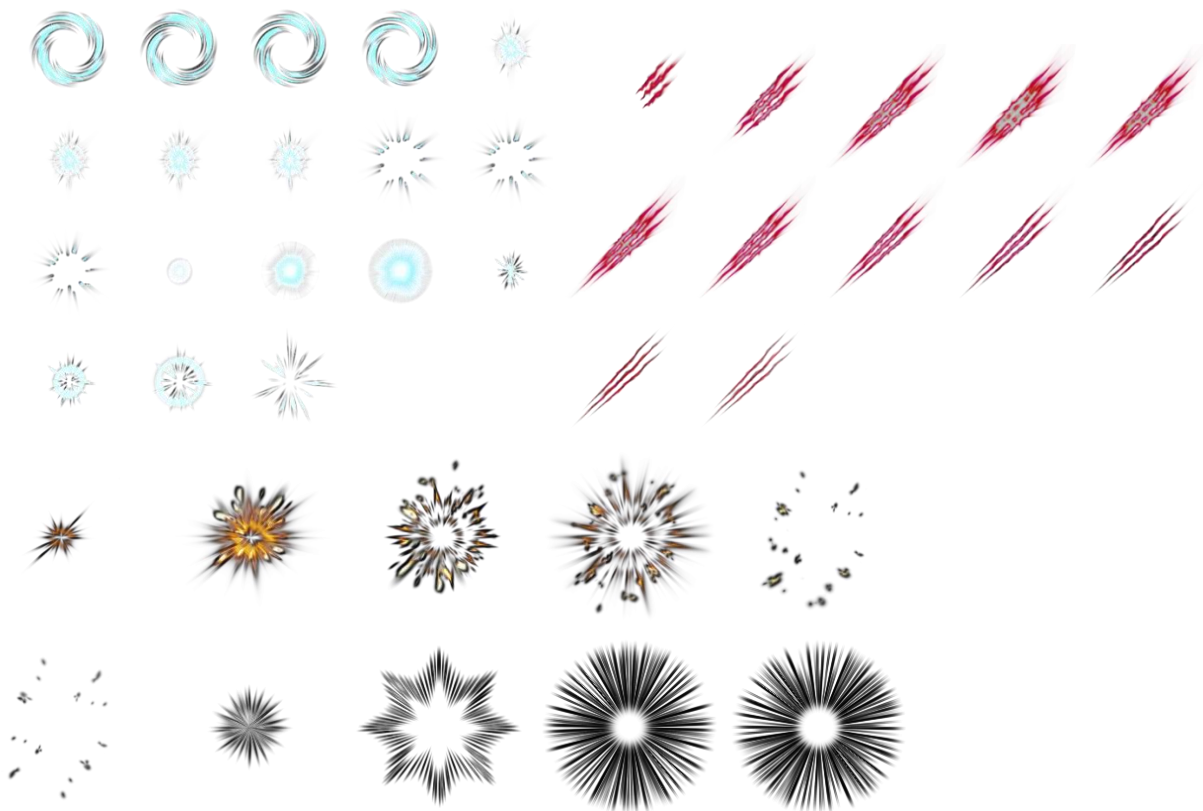


Unfortunately, these Animations did not make the final cut for my Thesis Project. If I worked on this project further in the future with a team, I would explore this additional content more fully. However, as it stands, this was the optimal decision for the build of the game that would be finished in time for my Thesis presentation. The storyboards took time to draw and produce. The decision was quickly made to leave the Cutscenes out for the following reasons:

1. The man-hours need to produce the quality of animation I wanted for this venture quickly became very high. I didn't want to put sub-par animations in the final result.
2. It fit the theme of Classic RPGs to not have animated Cutscenes. The RPGs that influenced me were traditional; all story elements played out using in-game sprites.
3. Because the “Interactive Experience” medium was cut from production, there was substantially less of a need to incorporate this form of animation into the project.
4. Cutscene Animations shouldn't be a deciding factor when comparing the game version of the story to the written version. If anything, it would have been extra content produced that might have been unnecessary if the written version was deemed a better way to present my ideas

II. Creating Animation for Sprite Sheets

However, this didn't mean that animation would be left out completely. Several other aspects of the game needed minor forms of animation to succeed and look coherent. I already talked about some map sprites needing multiple frames in order to be animated background pieces or to give coherent functionality to some map events. The simpler process of the other two uses of animation was the battle animations. By the time I was ready to create Animation assets for In-Game battles, I had already lined up all the attacks and moves with respective premade animations. It only took a few minor edits in Photoshop to convert these existing graphic sprite sheets into something that matched more of the Art style which I used for the rest of my graphics. By using this simple method, it saved me an abundance of time and was easy to have custom made animations to use in battle that were alternates to the standard premade assets that came by default with RPG Maker VX Ace. Unfortunately, many of the animations did not auto adjust with my Photoshop methods, and as a result had to be converted by hand drawing all bold outlines to match the game's style.

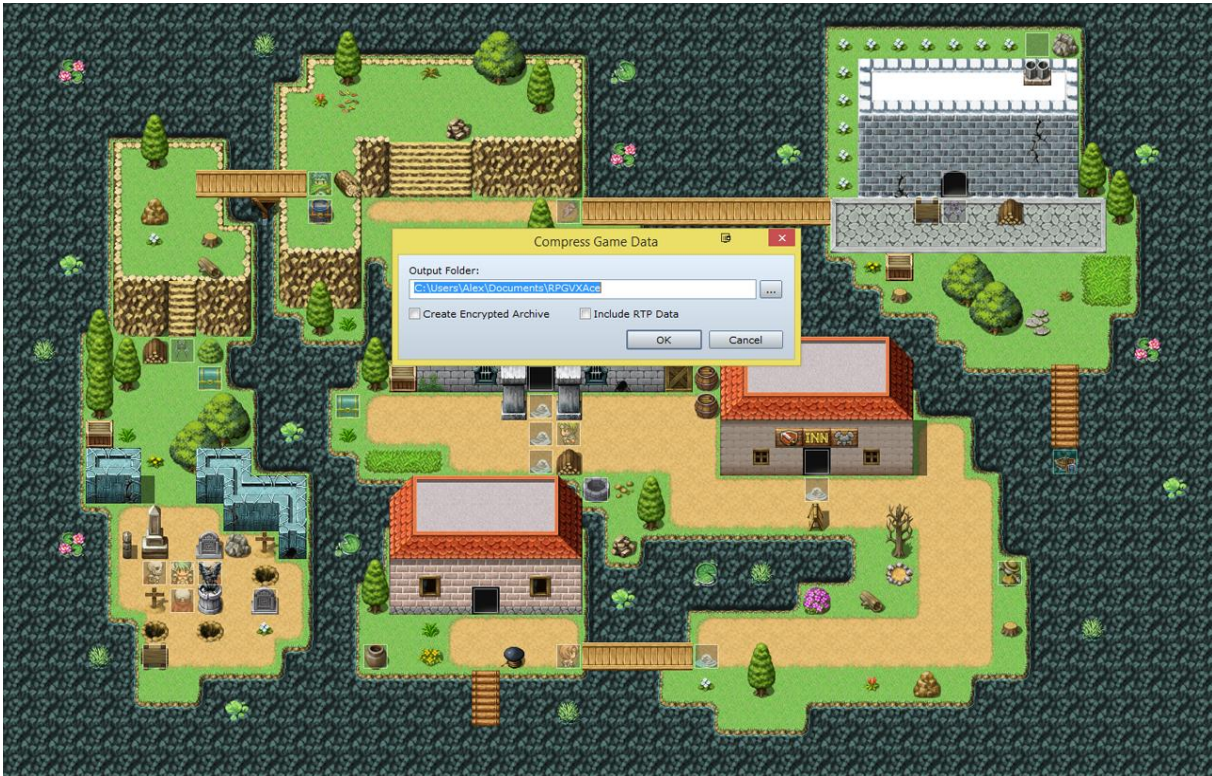


The primary use of animation ended up being for the character sprite sheets that allowed for movement and interaction. This custom content was created to forward to story, show character interactions in greater detail, break up long blocks of text, add variety, and allow the characters to simply move. These sprite sheets had to be created by hand for every character or creature that was going to appear on the map screen. Using my research on the subject and the premade sprite sheets as a template, I was able to create what I needed that functioned in the Engine. This part of the project was highly enjoyable, but took a great deal of time. Problems didn't really arise, but it took multiple tries and edits for all sprite to look correct, especially when viewed in a sequence. My process for crating the sprites was to first draw a larger version of the character that allowed me to put me detail into it. Then, I sized it correctly down. The image would become blurred and have poor pixel quality, but it served as a guideline to creating a simplified sprite over it to match up with the default RPG Maker VX Ace Sprites. Finally, a last version was made, completing the revamp process on the third try. This last sprite would be simplified and cleaned up, creating visuals that matched my game.



PACKAGING THE GAME

Packing the Game refers to the process of saving every aspect of the game from the RPG Maker VX Ace Editor and compressing it all into a standalone .exe file that people can use to experience the finished product. This was done so I could easily distribute the project and that the testers could play the game, but not actually have any options to edit any of the content. Accomplishing this goal itself was an easy process. I looked up a brief tutorial on and quickly learned the process. This was practiced early on in development as it was needed to save the Demo I made to test the engine out as a playable file. It was a really simple process.



However, an issue occurred when I discovered that the file size of the Demo was extremely large. This was due to the fact that it was saving out every premade asset found in RPG Maker VX Ace including Sprites, Backgrounds, Music, Maps, Animations, and Code. A multitude of this information was not used in the demo and the decision was made that for Game Beta that would be released at the end of this Thesis would be optimized to not include a majority of this unnecessary files. This was practiced to reduce download times. This decision, while a necessary one, came attached with a variety of problems. Trying to determine every single bit of code that was not required and could be safely removed without destroying the game would have taken thousands of hours of playtesting. Instead, I removed all the premade assets that were clearly not found in the game. The file size of the Game version of the story was still very large, so I'm glad I made these simple optimizations.

ANALYSIS OF STORY MEDIUMS

The point of testing the same story in two very different mediums was so that I could identify which medium to use if I ever wanted to expand the project. After both versions were completed in terms of this Thesis Project (up until the same point in the story, but not necessarily where the story is over), the next task became finding people to assist with testing my products. The criteria for choosing my testers was fairly simple. The two main guidelines consisted of them being interested in testing it out, as well as actually able to go through both versions in the small time frame between both projects' actual completion and the due date of the presentation. I was able to find around 50 or so people that expressed interest in testing the project throughout the yearlong endeavor of completing this, but I settled on around 30 as being a good number. This range of people consisted of a wide variety of characteristics, including both genders, varying age groups, varying relationships to me, and perceived favorite form of entertainment when offered a book or a video game. Of the original 30 people that I picked, I was only able to get 14 people to actually turn their feedback in on time. Feedback will be collected from the rest of these individuals if they ever complete both versions of my project. Nearly all of these people to actually finish both of my massive projects were friends and family from my hometown. I avoided asking people with busy schedules, like ETSU students that were working on their own finals. This was because I wanted the mediums to be fully tested. I decided to keep this process as casual as possible, because I believed making it extremely strict and professional would hinder the experience for the testers and it would affect the results. They reported their experiences with my projects in a variety of ways, including in person, as a word document, through email, over the phone, and even through the gaming program, Steam. The actual feedback had no required length. As a result, there was extremely varying lengths between my testers. Some people wrote or talked a lot about what I had done, others provided short sentence answers. The requirements of this actual feedback consisted of answering the following questions: "Which Medium created the best setting for my storyline?" and "What would be recommended for future development?" Simple questions are often the best ones to receive the desired answers. Most of the comments on the projects didn't involve criticisms other than a few discovered bugs. Instead, I received many towards future development related to just keeping working on the story in some form or another. People really liked the storyline and wanted more. The concept of these people trapped in an environment that continually killed them and brought them back to life with varying amounts of their memory intact really interested people. Two people even asked me for my extended storyline summary not featured as part of the Narrative medium in order to continue learning about the universe, characters, and story. This feedback was again related to what I needed to be working on in the future. However, to best answer which of the two mediums I would be continuing for future development, I needed to return to the first question I asked my testers.

I was generally surprised when I tallied up the results that my readers and play testers had given me. The final score ended up being that 9 people thought the Video Game was better, and 5 thought the Written Version was better. Thus, the Video Game Medium proved to excel more in terms of success than the written Narrative. At the time of its first release, people found several bugs which I attempted to fix after the fact, but they still ended up picking the game as the better way to share the story. There are many ways we can interpret and analyze this information. A few of my most important observations and theories are listed below.

Just because a game has bugs doesn't mean it doesn't have potential or isn't a work of art. Bugs can be compared to grammar, spelling, and continuity errors in a narrative document. They too can hinder the experience and make the work less professional or finished. The only difference is that bugs are harder to find and fix. People had the common sense to look past these small errors and at the storyline itself. I wasn't trying to make a perfect game or narrative version, only trying to find the best medium to showcase my story. The mediums themselves are only the first finished cut of the respective versions. Old forms exist and the chance of future enhancements is always present. One of the other most interesting things that I found from the feedback was that just because someone preferred one of the two mediums normally did not necessarily mean that they believed that my story should be told within that actual medium. One person in particular made me think that after he picked the story as the better medium just because he frequently played highly popular, mainstream video game titles and my experience was shadowed in comparison because I'm just one guy trying to develop the game's story in college, as opposed to many people whose sole job is one part of the larger title. In comparison, I think a few people that tested my projects who normally love books and hardly ever play video games chose the game as the superior version because of the visual experience that it provided. Sure they might have loved the narrative as well, but visual story telling is a powerful tool, which might have been able to persuade them to pick that version. Plus, unlike the person who is exposed to gaming on a regular basis, the simplistic style and visuals of my game might have been better received to people that usually prefer books. The change of pace probably furthered the story involvement for both groups of people. I'm glad I was able to provide two unique experiences for this Thesis.

CONCLUSION

The original idea behind this project was to make the story and universe that I had created succeed in the multiple formats I had chosen, and then determine which one worked better. The research accomplished for this project to build the two medium projects provided vital experience and knowledge that I can and will use in the years to come in the Video Game Design Industry. All the effort put into the writing background narrative information, a story synopsis, coding events, custom scripts, level design, and everything else that I have discussed was all accomplished in order to give the best possible representation of my story to anyone that experiences them. The people that tested/read my mediums reacted and responded positively to my work. Both the Written Narrative and the Interactive Game featured some form of success as some of my testers picked each version as the better product, validating my notion at the beginning of this document that either method could succeed. Despite different formats that certainly changed how I set up each version, using different tools such as extended descriptions in the narrative and visuals in the game to convey story information, the people that tested both versions experienced and felt like each provided the same overall storyline. I didn't receive any feedback or information to think otherwise. Out of the 14 people that were able to get their feedback to me in time for the completion of this project, the score ended up being 9 to 5 in favor of the video game I had created. Thus, this version is considered to be the more successful at sharing and showing my "vision." However, this is only the case in this limited study group. Small sample groups can provide general ideas and enough information to fill the requirement for this Thesis, but too many factors are still inconclusive to make any real assumption based off of the feedback that I have received from others. At the current time, no specific data can be concluded, but after this Thesis is over, the project and story will eventually continue on as part of my future goals, with my first order of business being increasing the amount of individuals that test each of my demos. The story is far from over as well, so testing will continue even after I can get a larger sample of people to confirm which version would result in the best finished product. I'll continue to get feedback from people and look forward to working on further developments of this project.

WORKS CITED

- Adams, Ernest. "The No Twinkie Database!" *The Designer's Notebook: the professional website of Dr. Ernest W. Adams*. 2013. Web. 4 May 2015. <http://www.designersnotebook.com/Design_Resources/No_Twinkie_Database/no_twinkie_database.htm>.
- "Add Different Page Numbers or Number Formats to Different Sections." *Support Office*. Microsoft. Web. 4 May 2015. <<https://support.office.com/en-ca/article/Add-different-page-numbers-or-number-formats-to-different-sections-bb4da2bd-1597-4b0c-9e91-620615ed8c05>>.
- Atsma, Aaron. "Bestiary - Monsters & Fabulous Creatures of Greek Myth & Legend." *Theoi*. Theoi Project, 2011. Web. 4 May 2015. <<http://www.theoi.com/Bestiary.html>>.
- Boos405. "RPG Maker VX - Enemy Transform Event Tutorial." *YouTube*. YouTube, 25 May 2014. Web. 4 May 2015. <<https://www.youtube.com/watch?v=yuzMBhqtr1o><https://www.youtube.com/watch?v=yuzMBhqtr1o>>.
- "Earthbound Battle Backgrounds." *GitHub*. 2014. Web. 4 May 2015. <<http://gjtorkian.github.io/Earthbound-Battle-Backgrounds-JS/samples/>>.
- Extra Credits. "Extra Credits - What Is a Game? - How This Question Limits Our Medium." *YouTube*. YouTube, 27 Nov. 2013. Web. 4 May 2015. <<https://www.youtube.com/watch?v=blj91KLOvZQ>>.
- Galv. "RPG Maker VX Ace Script Archive." *Galv's Scripts*. Web. 4 May 2015. <<http://galvs-scripts.com/>>.
- Indie Game: The Movie*. Dir. Lianne Pajot and James Swirsky. Perf. Jonathan Blow, Phil Fish, Edmund McMillen. 2012. DVD.

Kastens, Kim, Stephanie Pfirman, Martin Stute, Bill Hahn, Dallas Abbott, and Chris Scholz. "How to Write Your Thesis." *Ideo Columbia*. Web. 4 May 2015.

<http://www.ideo.columbia.edu/~martins/sen_sem/thesis_org.html>.

"How to Back up." *Steam*. 25 July 2013. Web. 4 May 2015.

<<http://steamcommunity.com/app/220700/discussions/0/864974396560025760/>>.

"How to Layout a Book in Microsoft Word." *DIY Book Formats*. 8 Aug. 2013. Web. 4 May 2015.

<<http://www.diybookformats.com/mswordtemplates/>>.

"How to Tell a Story." *WikiHow*. 2015. Web. 4 May 2015. <<http://www.wikihow.com/Tell-a-Story>>.

Jason, Perry. "Final Boss Blues." *Final Boss Blues*. 2015. Web. 4 May 2015. <<http://finalbossblues.com/>>.

"Make Your Own Game with the RPG Maker Series!" *Make Your Own Game with RPG Maker*. Web. 4 May 2015. <<http://www.rpgmakerweb.com/>>.

Melissinos, Chris. *The Art of Video Games: From Pac-Man to Mass Effect*. New York: Welcome Books, 2012. Print.

Moore, Collin. "From the Vault – The BioShock Pitch." *Irrational Games*. 20 May 2010. Web. 4 May 2015.

<<http://irrationalgames.com/insider/from-the-vault-may/>>.

"Narrative Essay Examples." *YourDictionary*, n.d. Web. 4 May 2015.

<<http://examples.yourdictionary.com/narrative-essay-examples.html>>.

Palmer, Nick. "Make Your Own Game - Tutorial Series." *RPG Maker*. Web. 4 May 2015.

<<http://www.rpgmakerweb.com/support/products/tutorials>>.

Patrick, Matthew. "Game Theory: Why You Play Video Games (1 Million Subscriber Special!)." *YouTube*.

YouTube, 31 Dec. 2013. Web. 4 May 2015.

<https://www.youtube.com/watch?v=MyUC_28HlvA>.

"RPG Maker VX Ace Master Script List." *RPG Maker VX Ace Wiki*. Web. 4 May 2015.

<http://rmvace.wikia.com/wiki/RPG_Maker_VX_Ace_Master_Script_List>.

Sachs, Mark. "The Grand List of Console Role Playing Game Clichés." *Project Apollo*. Web. 4 May 2015.

<<http://project-apollo.net/text/rpg.html>>.

Sant, Victor. "Followers Control." *Victor Scripts*. 21 Mar. 2012. Web. 4 May 2015.

<<https://victorscripts.wordpress.com/rpg-maker-vx-ace/utility-scripts/followers-control/>>.

Schell, Jesse. *The Art of Game Design: A Book of Lenses*. Amsterdam: Elsevier/Morgan Kaufmann,

2008. Print.

"Skyborn." *Steam*. Degica, 21 Feb. 2014. Web. 4 May 2015.

<<http://store.steampowered.com/app/278460/>>.

"Structure of a Personal Narrative Essay." *Santa Barbara City College*. CLRC Writing Center.

Web. 4 May 2015.

<<https://www.sbccc.edu/clrc/files/wl/downloads/StructureofaPersonalNarrativeEssay.pdf>>.

"Structuring a Narration Essay." *Narration Essay Guidelines*. IRSC. Web. 4 May 2015.

<<https://www.irsc.edu/uploadedFiles/Students/AcademicSupportCenter/WritingLab/E3-Narration-Essay-Guidelines.pdf>>.

Syvkal. "Syvkal's Menu Bars VX Ace - Completed Ace Scripts." *RPG Maker VX Ace Forums*. 16 Mar. 2012.

Web. 4 May 2015. <<http://www.rpgmakervxace.net/topic/1799-syvkals-menu-bars-vxace/>>.

Texlor. "Battle Start Animation - RPG Maker VX Ace." *RPG Maker Forums*. 13 Mar. 2013. Web. 4 May 2015. <<http://forums.rpgmakerweb.com/index.php?/topic/10357-battle-start-animation/>>.

"Theo - Animated Battleback." *Theolized RGSS3*. 28 Oct. 2013. Web. 4 May 2015. <<http://www.theolized.com/2013/10/theo-animated-battleback.html>>.

Thompson, Van. "How to Write a Summary With Bullet Points" *The Classroom*. Synonym. Web. 4 May 2015. <<http://classroom.synonym.com/write-summary-bullet-points-5711.html>>.

"To The Moon." *Steam*. Freebird Games, 1 Nov. 2011. Web. 4 May 2015. <<http://store.steampowered.com/app/206440/>>.

"Undefeated." *Steam*. Aldorlea Games, 4 Jan. 2014. Web. 4 May 2015. <<http://store.steampowered.com/app/332390/>>.

"Victim of Xen." *Steam*. Smolders, 21 May 2014. Web. 4 May 2015. <<http://store.steampowered.com/app/300220/>>.

Yanfly. "RMVXA." *Yanfly Channel*. WordPress, 26 June 2014. Web. 4 May 2015. <<https://yanflychannel.wordpress.com/rmvxa/>>.