THE EXALTED ENCOUNTER

A CREATIVE PROJECT

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BY

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Modern game trailers have moved far beyond a short teaser clip previewing gameplay. They have evolved into full blown cinematic adventures, conveying epic storylines, dynamic characters, breathtaking action, and deep emotion. I am interested in exploring the emotive and dynamic qualities of these trailers, using them to better showcase and highlight the characters and environments I have created for my demo reel.

In today’s 3d entertainment industry, there are an over abundance of demo reels that simply display characters in static positions rotating on pedestals, or environments through quick camera fly-throughs. This is generally the expected industry standard, tried and true. However, sadly, this leaves many demo reels lost in the crowd, regardless of skill level, simply because of the countless repetition. To avoid this, and help my work stand out from the crowd, I have created a savage environment encompassing four characters, posed for an epic battle, portraying a story that is never actually shown simply through the dynamic feel of the scene and cinematic style.

The main focus of this creative project is digital sculpting. Starting with a 2-dimensional concept and following the steps to take an idea to fruition. My goal is to further understand the physical and mental processes of the pipeline for game character creation. For demonstration purposes I have also included turntables of each character after the cinematic flythrough. These turntables have been placed after the cinematics to showcase a major focus of the creative project and the detail that went into each digital sculpture.

My plan was to convey the story telling through dynamic poses of each character and a moving camera with modern cinematography techniques. I chose to exclude any
character animation within the cinematic so that the camera captures a scene that showcases what could be called “the calm before the storm”. Based on the concept art “Suit Up” created by Jimmy Xu, the scene is a moment in time capturing the tension between enemies just before battle as they approach each other from opposite ends of the battle field. The removal of animation is intended to freeze this moment of tension into one segment of time that can be explored by the camera in a 3-dimensional space revealing the emotion involved from all angles.

The conceptual process is limited to selection and interpretation. Since I chose to focus my project on the actual digital sculpting processes and further education of the software, there was a smaller focus, on my part, on actually creating concepts for the characters that are presented. Instead, I chose to search through an online community of artists who specifically focus on concept art. My decision to do so is based on the real world application of the professional production pipeline in which a concept is drawn out by one person and handed down to a modeler/sculptor. I feel that this method provided a stronger focus on what I wished to accomplish and prepared me for processes that I may encounter in the future.

The overall pieces can be broken down into their original concepts that they are based off of. I have chosen 3 separate concepts that Jimmy Xu has provided. These 3 concepts are as follows; “Suit Up,” “Jump,” and “Katie’s Rage”. Furthermore, I have broken down these 3 concepts into their individual characters contained within. For the sake of my own interpretation of his concepts I have chosen to exclude some of the
characters that are in the individual concepts and combine characters that I have selected from each into one overall scene.

Selection of the characters was based on a typical video game plot in which there is one heroin (the main character played by the gamer) and a triumvirate of main villains. The 4 selections out of the 6 contained within the 3 concept images were fairly simple. I merely chose the strongest visual focal point of each image. Xu clearly felt that the characters located in these areas of the imagery were the most important and I took advantage of that fact. After the final decision of which characters to portray in the scene was made, I then gave them individual names based on the title of the concepts. The heroin was aptly named “Jump” since this is the actual title of the concept in which it came from. The other 3 are named “Rage,” “Red,” and “Monster”.

My influences usually begin with a search from my trusty web browser. The internet contains an endless supply of digital sculpture examples to help spark ideas and direct style. The main source of creative inspiration for the project was Zbrush Central (http://www.zbrushcentral.com/). This is a website that contains an array of artists who specifically use Zbrush for their art. It’s a community that opens a forum for artists to allow open critiques of posted works. ZBC has just about any style and skill level that one can think of, from someone who has just opened the program to the seasoned veteran who is posting their latest work from the next big video game release. In fact, ZBC is where I found 2 of my greatest influences, Hanno Hagedorn, a digital sculptor for Naughty Dog Inc., and Scott Eaton, a digital/traditional sculptor who has done work for Pixar, Ubisoft, Sony, and many others.
Hanno Hagedorn is an influence on my work in many ways. The most worth mentioning is the level of detail that is unsurpassed in the world of digital sculpting contained in his work. I have yet to find someone who can match the intricacies hidden within Hagedorn’s work that can only be noticed by timely, close inspections. I tried to incorporate some of this by adding small patterns to the skin and cloth of my own characters.

Scott Eaton’s works and tutorials have helped develop my style in an exponential way. In viewing his digital sculptures of hyper-realistic human anatomy, my confidence level in Zbrush has taken a rise. Eaton’s tutorials of his sculptures explain in great depth the ins and outs of the human figure. Eaton sculpted a digital replica of Edme Dumont’s physical analog sculpture, Milone de Crotone, which is currently placed in the Louvre, Paris, France. Eaton’s style mimics that of the classical Greek sculpture dating before the Common Era (b.c.e.). It takes on a type of realism that comes out of study of the human form. He has an affinity for the natural curvature of form and line that come about from the nature of muscle growth that can overlap, protrude, and undulate organically with the overlaying varied concentrations of skin. Understanding how those muscles are layered is key to a natural sculpture. I wouldn’t have been able to sculpt my characters “Red” and “Rage” without first learning the anatomical makeup of their figures.

The main idea of his method is to learn how to progress through stages of development while also learning to see the large and detailed shapes that make up the figure. Eaton teaches the skills required to translate an idea to a finished digital sculpture in three ways: Studying from Reference; Studying from Life; and Working from the
Imagination. By taking these methods into account I was able to quickly learn the necessary skills to properly develop a 3-dimensional character.

Among the useful tools that are available to the 3D community, a particularly helpful one is the online digital library at digitaltutors.com. Thanks to my employer, Kaleidoscope Animations Inc., I have had access to a corporate account at Digital Tutors during my continuation of this project. Having the access this account has provided an unending database of training that has directly influenced the quality of work that I am able to output. The database covers every piece of software that I used during the making of “The Exalted Encounter,” including Maya, Zbrush, and After Effects, among others. I watched at least one, if not more, tutorial video for each of the aforementioned softwares that proved to increase productivity and quality of the project.

The physical processes used to create the 4 separate sculpted characters were very much the same. They all started in a 3d application called Maya, made by Autodesk. A base mesh was created using quadrilateral polygonal planes to block out the basic shape of the character. That mesh was then exported out into a .OBJ formatted extension so it could be read by another 3d application called Zbrush, made by Pixologic. Zbrush is the main program used to digitally sculpt highly detailed 3d objects in the gaming industry and was the program that I used most during the creation of the project. Once the .OBJ had been imported into Zbrush I could begin blocking out more detail. I found that the best way use my time efficiently within the program was to work on the mesh in terms of level of detail. It was much easier to start with the larger shapes of the form and work my
way down to the smallest detail in order. Along with saving a sufficient amount of time, I also found that this workflow provided better quality than my previous attempts.

After I finished sculpting the character to the desired detail, I then textured it. This was also done in Zbrush in conjunction with a 2D painting program called Photoshop, created by Adobe. Every texture applied to the characters was hand painted in Zbrush with the exception of skin. The skin was taken from photographs that I acquired from a subscription to 3d.sk. A website the focuses on anatomy reference for humans, animals, and bugs. In the case of “Red” and “Monster,” I used swatches of natural skin color to create the humanistic feel. “Rage,” on the other hand, required more detailed work because of the unusual skin color. I started with the natural skin color and altered its hue in Photoshop to match what I had envisioned from the concept.

Learning how to properly map the textures of the characters proved to be crucial considering the final style that I was shooting for was that of a game cinematic. The mapping process is slightly different when it comes to real time engines compared to production renderings. There has been much advancement in the technology that we use to play our video games but despite the exponential growth of speed and power, these technologies aren’t without their limitations. The polygon count of the 3D meshes must stay at a relatively low number compared to production meshes. In this case the level quality must rely heavily on the texture maps.

Normal mapping is a texturing method used in my project that allows a 3D artist to essentially trick the camera into seeing a higher level of detail than what actually exists within the 3D space. These maps turn the low count polygonal meshes into visibly high
count polygonal meshes. This saves memory during rendering which in turn gives an artist faster renders. Saving memory is crucial in a real-time environment because gaming systems are working directly from a finite source of memory. Keep in mind that although the final output of “The Exalted Encounter” is a rendered production video, I have made it so that it could easily be placed within a real-time environment.

Once the characters were textured I went back to each one and put them in a pose more suiting to the concept since I had originally sculpted them in a T-pose. Next, I brought them into one scene in Maya using a reverse process of exporting and importing. Lighting was then applied to the scene which gave it the initial look. To finalize that look, the shaders for each object were then adjusted to match the desired material. Much tweaking was done to these shaders until I got the final look that I wanted.

The next step was a very crucial part of project. The camera work. Animating the camera to capture the emotion that I wanted proved to be difficult considering the characters were frozen in time. Extensive research was done on camera angles and focal lengths that are known to portray a specific emotion. For example, low camera angles (shots below the eye line looking up) create a sense of power. I decided to use varying focal lengths in certain areas which help to create a feeling of discomfort or tension.

Finally the scene was rendered and composited. Compositing puts all of the shots together and allows for final adjustments such as motion blur, color correction, depth of field, etc. The music was carefully chosen to match directly with the timing of animation.
Over the past year and a half since the start of this creative project, I have learned many things. Despite the fact that I lost time on the project from August of 2010 to February of 2011 due to the start of my career with Kaleidoscope Animations Inc., I feel that the time commitment has proven to be a useful experience. Everything that I have learned through tutorials, people, and experiences, I have been able to put to use on almost an everyday basis.

I have learned that compromise doesn’t necessarily mean loss in quality. In the world of 3D animation sacrifices have to be made in order to meet strict deadlines. These sacrifices have to be carefully sorted and weighed so that the end result doesn’t suffer. Luckily, there are areas were shortcuts can be taken. Time spent on one aspect of a project means time lost on other areas of the project. It is important to understand that one must not get hung up on the details of a particular area unless it is absolutely necessary. An example of an area where an artist can sacrifice time is the area outside of the depth of field, or the area in which the camera is in focus. Since these areas will be knowingly blurry in the final output, it can be easily assumed that less detail is needed for those areas of the shot.

An essential and crucial point that I have learned with this experience is to save often and always save out in separate iterations of a file. Going back to the fact that our current technologies aren’t without their limitations, instability of a program can be an issue. Authors of the softwares used have done their job, but coding is never perfect. Certain triggers within program can cause them to crash without warning taking any changes that have been made to a file with it. This is time that can never be taken back if
the file hasn’t been saved recently. I have also found that while saving, files can corrupt, also causing loss of information. In this case it is best to save out a separate iteration of the file so that in the case of corruption another file exists, saving any further lost time.

When viewing “The Exalted Encounter” in an exhibition space it is important to note that although the work is being viewed on a 2-dimensional plane, the characters being portrayed are in fact 3-dimensional sculptures in virtual space. Take into account that the main focus of the project is digital sculpture. When the sculptures are being created in the software they can be “walked around” by rotating a virtual camera just as one would see in the real world. Not taking this fact into account would render the opposite side unseen by the camera completely pointless. This is why I have chosen to include full turntables of each character in the final output of the video.

Now that I have reached the culmination of this creative project, I feel that it has helped me develop the skills that I need to apply myself in a studio environment. In fact, it is the skill that I developed during these processes that allowed me to acquire a career with Kaleidoscope Animations Inc. I now have the ability to apply these skills daily for clients who require visualization of their products. I plan to continually develop these skills so that in the future I may start a business designing products of my own.
Bibliography


Appendix

Original Concept Art

“Suit Up” by Jimmy Xu
“Jump” by Jimmy Xu
“Katie’s Rage” by Jimmy Xu

Product Suppliers

Adobe
Autodesk
Pixologic
Crazy Bump