Abstract

As the world of modern movies grows ever more diverse and complex, the need for unique and engaging characters and worlds increases. Visual development is a crucial part of the production process of any film or television show, changing and directing the look of the final piece. While the audience will see the final, polished product on screen, what they won’t see is the multitude of designs that didn’t make the cut, the scrapped ideas or the drawings that just weren’t quite right. In this project, I spent several months designing and developing a variety of characters, props, and environments in order to explore the artistic process and creative problem solving behind the art of visual development.

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Over the past few decades, the realm of cinematic world building has grown nearly exponentially. As software continues to advance, the details and complexities of these virtually created worlds has only grown. This is where a visual development artist comes into play. Also known as concept art, visual development is exactly as it sounds—the development of a film before it moves into production. While this pre production is important in live action films, it is crucial to the animated feature film, as absolutely every element seen on screen—characters, props, and environments—all must be designed to create an immersive world. While most of this art never sees the light of day (save for “art of” books you can find for nearly every major film nowadays), each design is a system of trial and error to reach the final product.

This project was an effort to explore the various steps of visual development that would be necessary for an animated film to come to life. It was heavily influenced and inspired by the many “Art Of” books for animated films, as well as concept art from various films that can be found online. Each film has a unique look and feel to it, depending on the needs of the film and the story. Various genres of film and storytelling also inspired the look and feel of many of the elements of this project, leading me to create a wide variety of work. This included the development and design of characters, props, and environments over the course of a semester. This project was a chance to step beyond the realm of character design which I was used to doing in previous courses and having an opportunity to expand into other areas of visual development.
The first pieces of this project started where all stories start – with characters. As the audience will literally be watching a character’s every move, it is necessary that this character feel like a living, breathing being that would have the design and detail to exist in a real world. Many of the designs throughout this artistic venture were reaching out into various character archetypes and genres that I had not previously explored in design.

The first of three lead characters featured in this project was a young African American girl with a robotic prosthetic arm. She was designed to be an adventurous and active character as portrayed in her design and body language. This character was meant to fit into the genre of Cyberpunk, which tends to focus on the juxtaposition of advanced technology and a dystopian future. To fit into this genre, this girl had to feature this same mix of new technology and the feel of a dark and grungy world.

Finalized design for character one
When genre dictates design, the creation of a cyberpunk character led to some very specific stylistic choices. Cyberpunk is seen as a contrast of promising and advanced technology and a gritty, action filled environment. With this in mind, many elements of her final look were meant to contrast greatly from each other. Her hair is bleached a white blonde to contrast her dark skin. Her clothing and color scheme is a mix of bright neon blues and grungy, dirty blacks and navy blue. Many variables of her outfit were taken into consideration, her most intricate and distinguishing figure is her prosthetic arm.

There are many ways to approach the design of prosthetics, which vary drastically between genres. Modern arm prosthetics are designed to be purely functional, with simple hands or tools. Many sci-fi prosthetics are exaggerated and overpowered, meant to bulk up a character or conceal guns or various weapons. Some cybernetic designs attempt to make the prosthetics and mechanical elements as realistic as possible. For this particular character, however, I wanted something that looked distinctly and undeniably metal and mechanic, and yet had an organic feel to it. When a character lives in the sort of fast and dangerous world that the cyberpunk genre tends to imply, it’s easy to assume that accidents and injuries happen, creating a need for cybernetic appendages and prosthetics. The idea behind this girl, however, was not that she’d lost her arm from some terrible, traumatic incident, but perhaps that she was simply born without it. This created a character that was perfectly still capable of being active in this world, aided by the prosthetics and technological advances available within it. With this motivation behind the prosthetic design, the intention was not something gritty, powerful or weaponized, but easily recognized as human. I wanted a design that felt natural and
inconspicuous, something that would fit in with the world without being ostentatious. While the design went through as many steps of trial and error, the final look of the arm was something sleek and streamlined, organic and still functional. Like the rest of her character, her arm had to provide a contrast between her and the rest of her design. To achieve this, the metal of her arm is a bright silvery color, again contrasting against her dark skin much like her hair does.

The second lead character developed in this project pulled away from the fantastic and futuristic to a more realistic and down to earth character. In an effort to maintain diversity and a wide variety of characters, the next design was that of an older gentleman, particularly a gardener. The result was an older, tired, cynical sort of man, the type to always yell at the neighborhood children to get off of his lawn.

Design for this character had its own unique set of challenges. In trying to ground our gardener in the real world (if you’ll pardon the pun), the outfit had much less room to experiment. The character wound up with a simple and practical outfit - jeans, work gloves and heavy boots, and a grungy apron. The most distinguishing design element of this character, however, is the shape and silhouette of the body itself. While the initial design started off with a burly, middle-aged man, it didn’t quite fit the initial idea of the character. As this character slowly evolved, he became heavier set, thick and stocky with short legs. His face became very square, with a large rounded nose and wrinkled skin.
All of these elements aged the character, making him feel more like a crotchety old man.

**Final design for character 2**

The third and final lead character of this project stepped back in time to draw from a more historical fiction genre. The design was that of a young red headed buccaneer, and noble and heroic character. For this character, I wanted her to have a distinct and recognizable style that drew directly from 17th and 18th century naval uniforms and designs. This required researching coat styles, uniforms, fencing swords, and flintlock pistols to bring together all of the elements of her design.

Of the three lead characters developed in this project, this young lady took the most circuitous route to reach her final design. Nearly every aspect of her went through
several trial and error sessions of changes and revisions. Her face went from rounded to angular, while her body changed from average, realistic proportions to wide shoulder pads, a tiny waist, very large hips, and slender legs and ankles to create a more exaggerated body type and silhouette. Her hair color was established early on as a strawberry – blonde, though her hairstyle took several passes of design before one was finally chosen, ranging from a simple ponytail to a series of braids to simply falling loose around her shoulders. The final style was a braid along the right side of her head that tucks into a bun at the base of her neck. This design was chosen as a way for the character to maintain her long hair and have it pulled back an out of her way for practicality’s sake, while the braid added little bit of femininity to the look.

The buccaneer’s wardrobe, however, changed the most in not only her design, but across all of the character work done in this project. Her coat was heavily influenced and inspired by those worn by naval officers in the 17th and 18th century. In looking at the trends of the time period, it was established that her coat would be a rich navy blue with gold embellishments. Like her hair, her coat went through several variations before the final pattern was chosen. Her final wardrobe design had a coat with simple gold edging along her breeches, brown knee high boots, and a navy blue coat with gold trim along her cuffs, collar, and shoulder pads.
Final design for character 3

Each of these three characters went through various steps and stages of concept and creation to reach their final form. Upon arrival of the finished and approved character, a final, polished painting or turnaround of the character will be created to pass on to modelers, story artists, other development artists, and animators to begin production. Similarly, after determining the look of each of the three lead characters, they were presented by fully rendered digital paintings.
The first of these character paintings, the cyberpunk character, had several unexpected hurdles. While each character had its difficulties and challenges when it came to the painting stage, this particular character’s skin tones were a unique trial. Painting flesh tones, be it digitally or with a physical medium, is difficult to do, as there are many colors that make up flesh. Warm flesh tones mix with cool shadows, which change as light wraps around the form of the body. The color palette changes with each individual’s skin tone, especially so with African American skin. It was a challenge I had not encountered before in this style of painting. After looking at various examples from life and a few rounds of experimentation, I managed to create a color palette with various shades of brown, orange, and violet to get the color and value range that was needed to make a convincing flesh tone for this girl. From there the challenge was making the various elements of the character feel as though they were made of different material. Her pants had to look like a sleeker material than her shirt, her boots were a matte material as opposed to the leather of her belt. Most importantly, however, her arm had to look like it was made of metal. Her arm was painted a light grey before adding sharp, white highlights next to dark grey shapes along the arm to make it feel like a shiny material.

Another important element that needed consideration was the idea that nothing in life is every truly perfect. This girl lives in a cyberpunk world, a rough and grungy future full of technology and action. In order to make her feel like a character that existed in a real world, she had to be ‘dirtied up’. Her clothes all received a layer of dirt and texture, while special attention was paid to her boots, which would logically be dirtier than the rest of her. Her prosthetic arm also received special attention, as it not only received a
layer of dirt and grunge, but also had small scratches painted on it, implying wear and
tear from everyday use.

The second character, the gardener, also received the amount of attention for these sort of
details. Being a gardener, it was even more important that the character feel as though he had been at work out in his yard or in a garden or greenhouse. It's not enough just to put a rough texture over the character's clothing and call it dirt, however. When it comes to adding finishing details like this on a character or a painting, it is important to look at examples from life or to think and question why certain aspects of the design would look a certain way. For example, while there is dirt on the gardener's work gloves, it is thicker and more apparent on the knuckles and fingertips than it is on the rest of the glove. Likewise, his jeans are caked with dirt around his ankles, while the denim on his knees are covered in grass stains rather than dirt.

The final character in this set, the buccaneer, didn't require as much attention to wear and tear as the previous two. The design of the character is heavily influenced on the uniforms and regalia of a naval officer, and was meant to be a little cleaner than the other two. The coat and breeches she wears are made of the same smooth material, while her boots have a rougher texture and the gold trim on her coat has a nice healthy sheen to it.

After the creation of the characters, the next step of visual development was to design props and objects for the characters to interact with. The first character, the cyberpunk adventurer, received extensive design and exploration into her prosthetic arm. Her initial design process saw the look and feel of her arm change and evolve from a clunky, industrial look to a sleeker, organic piece. A robotic prosthetic, if designed to be
organic, had to look and feel as though it would function and move as well as a flesh and blood hand would. This meant paying attention to detail in the design process, making sure the fingers had enough joints to move and that the 'pads' of the palm of the hand could bend and fold to give the girl all the dexterity she would need to function properly.
The buccaneer’s props, much like her wardrobe, went through several changes and variants before I decided on the final look. She was given a fencing blade and a flintlock pistol, both of which were heavily influenced by 17th and 18th century styles. There were several different designs for the buccaneer’s sword, each in varying levels of complexity. The final design was an elegant, gold rounded hand guard. Likewise, her pistol was also historically influenced, following the long barrel and round handle of an 18th century flintlock. The final chosen design was a simple, long barreled flintlock pistol with small, swirling engravings along the barrel.
Chosen pistol and sword design

The gardener's prop designs were mainly focused on drawing a variety of plants and gardening supplies, including various ferns, flowers, shrubs, and trees in a variety of ceramic pots, buckets, and mason jars. Other design assets included potted trees, a wheelbarrow, and a fallen plant, pot broken and dirt spilled on the floor. Each of these garden elements seems small and insignificant, but together they have the makings of a fully fleshed environment that took into consideration everything that would be in a finished world.
Various plant studies

The last step in this project was bringing everything together into the actual creation of a fully realized environment. This was a chance to step into a realm of design and painting I had never had the chance to explore. When it came to designing an environment, I made the decision to create something familiar – a greenhouse. This would create a space for the second of my three characters, the elderly gardener, to occupy and live in. The final result, a series of color digital paintings, like everything, had a long list of steps before arriving at the final product.

The initial draft and design of the space required research and references as to how many greenhouses are laid out and designed. From this, the construction of the
greenhouse began. After creating a simple blueprint of what the final composition would look like, it was time to become more specific and detail oriented. General shapes and amorphous piles of leaves wouldn’t do when it came down to the actual painting. There are a variety of plants in the greenhouse, as well as various other props and objects. Plants are not confined to terra cotta pots, but are also housed in trays, buckets, teacups, glass jars, and coffee mugs. A watering can and some gardening tools can be seen lying around, and towards the foreground of the piece, a potted plant has fallen over, spilling dirt and pottery shards across the floor. The piece is packed with detail in an effort to make it believable. Layers of dirt and grunge were built up all over floor and tabletops from dirty hands and muddy boots. Terra cotta pots are cracked and dirty. Teacups and coffee mugs have cracks and layers of dirt on their handles from being handled. Handheld garden tools are caked with dirt and the windows are grungy and cracked. While stylized, of these details are an effort to make the space feel not just like a room, but an environment that feels lived in.
Final painted environment
All of these assets – the characters, the props, and the final environment – are the major elements that make up visual development. This project was an endeavor to follow the process and problem solving that would occur when designing and developing assets for an animated series or feature film. The final result of the project was a body of work with a variety of characters, props, and an environment, along with all of the development work it took to reach the finalized designs.
Colored versions and additional visual development from the project can be found at RScottDraws.Artstation.Com