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JACK

Master of Fine Arts Thesis Production

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Han-Yi Tseng

Date: 1/10/18
I. Acknowledgements

First, I want to thank the Rochester Institute of Technology for giving me this opportunity to study in the United States of America. During my studies in Taiwan, I did not have the chance to learn 3D animation and I had doubts and fear when prior to coming to RIT but the School of Film and Animation had managed to wash away my fear and doubts and presented to me four years exciting and refreshing experience. Technical knowledge in the field of animation wasn’t the only thing I gained during my stay at RIT; my stay had allowed me to mature as a person. Thank RIT and SOFA for giving me a chance to study in such a wonderful environment.

Secondly, I would like to thank the faculty members of SOFA especially my committee members for all the support and help. Malcolm Spaull, my committee chair was a treasure chest filled with great advice. He was supportive and helpful through every step of my thesis. Without his support and his ideas the process of completing this thesis would had been a lot more difficult. The professors at SOFA had given me the tools that I had needed to succeed. They had helped me through the course of my studies at RIT and boosted my confidence. Without their guidance I wouldn’t have been prepared to tackle such a difficult task.

Lastly, I would like to thank my parents for their support, both spiritually and economically. Without them, this journey to RIT would have been impossible. Thanks you.
II. Pre-Production

A. Graphic Style Decision

My film utilizes a cartoonish and simple style. Several factors were considered during the initial design phase to reach this verdict. Firstly the intended target audiences are young students and teachers of Taiwan. A film with a cartoonish and simple style connects better to the younger generation. A film with a more complex style may be more visually appealing to the older audience however they are not the intended audience. Technical issues were also factored into these decisions. The film utilizes many characters. Since it is an one man production, it would be very time consuming to create characters that are comprised of high polygon. The computers used for this production would also have problem handling the extra weight of complex characters. Considering the technical aspects and the target audience of this film, the decision was made that the film was to take on a cartoonish and simple style.

B. Character Design

My film is about Taiwan’s education system. The film revolves around a classroom with several students, their teacher and Jack, the main character. The goal is to demonstrate the fault of the education system. In Taiwan the education system decides what the teacher teaches and what the student learns. The result is a lack of creativities. The students’ opinions are generally not taken into consideration. The film’s goal is to bring out the fault in the system through symbolism and exaggeration. These are the basis of the designs of the characters.

a. Jack

The main character, Jack, is a new comer to the school. He is a very creative boy that had not been exposed to the education system. To show the contrast between a student that had been within the education system for a long time and a new comer, Jack is designed to look different from the rest of the classmates. His shirt is untucked demonstrating a sense of rebellion. He has big eyes, round face, looking cuter, shorter, and fatter than other students who are more serious and mature looking. This demonstrates how Jack is still untainted by the educational system.
b. Classmates

The rest of the classmates are controlled by educational system. In Taiwan, students learn what teacher teaches. The method of teaching could be described as spoon-fed education. Creativity and expression of one’s ideas are often discouraged. To portray this system at work, the students are shown to have no variation from each other. They are portrayed as clones that had been brainwashed. They conduct the same action, dress the same way, and create the same product. Their actions are rigid almost robot-like. They have no facial expression until Jack wakes them up. They wear clean and neat uniform in contrast to Jack’s untucked shirt. They wear black leather shoes to show that they have been packaged in the way the society deems decent. The students are very mechanical and seem cold and lifeless as if they were products rolling off an assembly line.

c. Teacher

The teacher is an extension of the educational system. In Taiwan the ministry of education decides what needs to be taught. The teachers often have no control over the syllabus of a course. To demonstrate this idea, the teacher is not portrayed as an individual. She is part of the system teaching and acting according to system’s orders. Since she has no control or freedom over what she is doing, this makes her effectively an empty shell. To bring out these ideas into a visual form the teacher is portrayed as a ghost. She is hallow and empty showing how she is only a shell controlled by the system. Her only means of expressing her feelings are through a mask and not a face. While in school the students are effectively within the system. To show that the students are effectively surrounded by the system, the teacher flies rather than walk. This allows her to fly above students as well as to move to areas she needs to get to with great speed creating a feeling of control and pressure towards the students.

C. Scene Design

a. Classroom

In order to design the classroom reference pictures of real classroom were used. The classroom was designed to resemble a typical classroom in Taiwan with several key differences. The classroom’s walls are the bleach white. The intention behind this design is to make the classroom hold the feeling of a laboratory where students are raised and created rather than taught. This is in strong contrast against Jack’s playroom which uses warm yellow lighting as oppose to the glaring cold white light of the classroom.
b. Playroom

The playroom is a symbol of creativity and childhood innocence. To show creativity, the playroom is filled with a wild range of colors. The walls of the room are painting signifying Jack's creative ideas. To show childhood innocence, toys are placed all over the room and the room is bask with a warm light as oppose to the classroom's glaring white light.

c. Vat room

The vat room is the center of the educational system. It holds the educational system's knowledge. It also serves a means to force the ideas into the student's minds. The vat room symbolizes the ugly truth behind the education system. It is the core of the how the system functions. To present this symbolism, the vat room is located in the back of the classroom and its location is surrounded by the school making it the center of the system. The vat room itself is mechanical. It is comprised of steel plated room with a large vat in the center. Many small tubes are connected to the vat. The vat itself holds the ideas of the system and has an eerie glow. The materials used in the room are of a non living nature but the room as a whole looks alive with the vat in the center of the room acting as a heart pumping out the ideas to the rest of the tubes. The whole room could be seen as a mechanical organism of a nightmarish nature hidden behind the bleach white walls of the classroom, the dirty truth behind the facade of the educational system. The picture below was used as a reference during the design of the vat room.

From wikipedia.org

D. Prop Design

The film utilizes many different props to aid in the delivering of the meanings. The designs of the props have gone through significant thoughts like the characters and the scenes.
a. Tubes

The tubes are like the hands of the system. They are connected to the vat and are used to pump the ideas of the system into the minds of the students. Like the rest of the items found associated with the system the tubes are comprised of non living matter. They are semi transparent and have a snakelike movement to show their craftiness.

b. Light bulbs

The light bulbs are the symbols of ideas. There are two different types of light bulbs, one from Jack and one from the system. The light bulbs from Jack emit a warm yellow glow and are of a round shape. This shows that Jack’s ideas are accepting and adaptable. The systems light bulbs are rigid and emit a green light. This shows the system’s ideas are rigid, not adaptive and forceful.

c. Radio

It was decided that a radio would be the best fit to show how students are taught in Taiwan. A radio playing a prerecorded message over and over again shows how the education is generally done by repetition. The radio also acts as a switch for the tubes just as when a teacher starts lecturing the ideas starts flowing into the students mind.
III. Production

Production began in September 2005 and took one year. This section would cover 3D modeling, texturing, rigging, the animation process, lighting and rendering. Tools that were harnessed during the production period were Maya, Adobe Photoshop, and Adobe After Effect.

A. Modeling

Three scenes were created for this film, Jack’s playroom, the classroom, the vat room. Creating the models for the scenes was straightforward. Three rooms started out as a rectangle polygon. Furniture and other details like Jack’s toy and windows were created as polygons and moved into place in the empty room. If there is need for the room to be reshaped, such as windows which required a hole to be cut into the wall, the room’s polygon is altered either through the use of Boolean, cut face, or extrude. To save time an attempt was made to reuse as many models as possible. Details like lights, tables, toys were duplicated and reused with little or no change made to them. Moving elementals such as the tubes were also modeled and placed within the scene.

The modeling of the characters was a lot more difficult than the scenes. Although the models of the characters were polygons, they began as NURBS. The benefits of NURBS modeling are that it is smoother and less time consuming. For these reasons, I chose to use NURBS to build my main character’s rough head and body. Polygon modeling however has the advantage of having more freedom when adding texture as well as the ability to create more details than NURBS. For those reasons I converted the NURBS shape to polygons once the rough shapes were completed. The textures and details are then added to the characters. In an effort to add more details to the character models, more faces were extruded from the polygon. Half of the character is first created. The half is then mirrored over and knitted together. Hair and other asymmetric features are added after the knitting. Once again to save time, I used main character’s modeling as the base model for the other students. The details were modified to fit the characters. The teacher’s face mask was created by importing a picture of the mask as a reference than creating the polygon using the picture as a background and guideline.
B. Texturing

Texturing is an important aspect of the characters. A simple model with great textures could deliver a stronger message than a highly complex model with poor textures. Since the models were mostly created by smaller individual components, it was a matter of finding the right texture for each component and assigning that texture for the whole polygon. This was a very time consuming process. While creating and texturing the static part of the scenes was relatively straightforward, making the characters was a lot more difficult. Since the models of characters were comprised of one large polygon as oppose to many component polygons which the scenes had, it wasn’t possible to simply assign each piece their own colors and textures. To overcome this difficulty, UV mapping was applied to each model in Maya. The UV mappings are then exported to Adobe Photoshop where the textures are then applied. One again pictures were used as reference to aid in creating a realistic representation of the characters and scenes.

There were several expectations to the conventional texturing process. The most notable example is the textures for the drawings. Since the drawings were being drawn by Jack during the film, a simple static texture will not be able to show the process of drawing the picture. To show the pictures being drawn, I used ArtRage software which is a bitmap graphics editor created by Ambient Design Ltd. The process of drawing of the picture was captured by using a screen capture software called Screen Recorder Gold. The software records the actions occurring on the screen and saves it as an AVI format file which was then loaded into Maya as a “Movie” texture. Jack’s hand movements are then timed so they move along the lines that are being drawn on the picture to create the illusion that Jack is actually drawing the picture. Another expectation is the texture of the light bulbs. The glow of the light bulb is extreme important, however a normal texture does
not emit any glow effect. To allow the light bulbs to glow correctly, the glow effect in its texture had to be applied. This allows the texture to not just give the light bulbs a color but to imbue them with a glow as well.

C. Rigging

In order for the characters and other props to be animated, they would need a set of skeleton to drive them. The process of creating and binding the skeleton to the model is called rigging.

The students utilized a standard human rig to control them. The teacher however had to use a modified rig due to her robes. Extra “appendages” were extended from a standard rig to animate the robes. Deformation effects of Nonlinear were also applied to allow the robes to have a more flowing feeling.

A skeleton was laid out in the tube and a single IK controller is used to control the tube like a snake. I used the IK Spline Handle Tool add the syringe’s joint. There are five curve vertexes on the IK Handle. Each vertex is then assigned a cluster. Finally five controllers where made for each cluster in order to make animation easier. The same treatment was applied to the teacher’s sleeves of robe.

![Tube’s IK Spline Handle set up](image)

All characters used Smooth Bind to bind the model to the skeleton. Smooth binding has the advantage of being easier to paint the geometry weight. The most difficult parts that needed to be rigged are the parts connected with the body that have wide range of swing, like shoulder and thigh. Characters’ hair, eyeballs, teeth and tongue were not bind but rather they were parented with the skeleton.
D. Animating

The facial expressions for both the teacher and the students were actually many different models each with a different expression. To animate between the faces, Blend Shape was used to allow smooth transition from one expression to another.

Before animating the character, it is important to fully understand each movement that the characters had to make. To allow realistic animation, the actions often had to be acted out in front of a mirror. After getting a feeling of how the action should look like through experience, it was a lot easier to accurately animate the characters. After understanding the movements, the first step of actually animating the characters uses a method called Pose to Pose. It is a good way to give us a rough idea on how the flow of the animation matches the story board. After the rough poses had been set, the movements in between the poses are added. Their timing are then adjusted until the flow of movement feels natural. When satisfied with the animation timing, I animated the character’s facial expressions and other details that follow with the main movement, like the hair and sleeves of clothes.

To allow the teacher fly naturally through the air, the robes needed to be animated as well as the teacher herself. For the teacher’s sleeves, I used the controller to make the push forward movement more natural. For the robe I add the deformation effects of flare, tweak and blend to create a floating sensation.

Making the dynamic element part of the scenes was a lot more difficult. Tiny light bulb needed to flow within the tube to the students. The light bulbs were actually particles, using particle replacement. To allow the light bulbs to flow with the tube several methods were used. Firstly an attempt to make particles and the tubes collision objects wasn’t successful. The particles due to faulty calculation continuously fall thru the tube. In the end a curve was created and parented onto the skeleton. This curve is converted to the motion path for the light bulbs. The light bulb would then follow the curve which would follow the movement of the tube. The light bulbs in the vats were animated with a different approach. It was difficult to create the feeling of floating naturally through manual animation. It would also take too much time since there were many light bulbs to be animated. To resolve this situation, the light bulbs were once again created as particles and replaced with a model of the light bulb. Dynamic fields were applied along with the following MEL scripts to allow the light bulbs to float naturally in the tubes.
Once all the character was animated the camera had to be set. The storyboard would act as a reference to what the camera captures. The view in 3D camera does not always conform to our anticipation as well as 2D drawing. Often the camera had to be shift around at various angles and distance before finding the desired shot. When a decent shot is found it is first keyed for reference. Each of the shots is then compared. However since Maya does not usually play back in real time, because the computer simply doesn’t have enough processing power, Playblast is used. Playblast allows a rough render of the animation, this allows the scenes to be reviewed in real time which makes timing corrections a lot more accurate.

E. Lighting

Lighting is an extremely important element in animation. Lightning is one of the main contributors to the atmosphere of a film. A very good example demonstrating the impact that lightning has toward the atmosphere would be the vat room. Prior to Jack’s intervention, the light in the vat room was green and cold. It creates a very mechanical, also dead feeling. After Jack had place his light bulb in the vat, the lighting of the room turns yellows changing the atmosphere making it warm and friendly. Careful manipulation of the lightning in the scene allows great control over the scene’s overall feeling and atmosphere.

Compare the difference of lighting color

The scene uses basic three-point light setting. The light color is then adjusted according to atmosphere. As for characters, the basic setting of lights is usually not enough. Different character movement and camera angle requires different light setting. Since the distance between characters and camera also affects light, the lighting needed to
be checked on each shot to make ensure the correct feeling is created. This was a very time consuming process.

Since my scenes are huge, I used Dmap shadow instead of Raytracing. It saved a lot of render time for most of the scenes. The vat room however is an exception since the light reflects and refracts through the vat which is an effect that Dmap is unable to create.

F. Special Effects

The film utilizes some special effect. The special effects seen in this film are the lighting of the light bulbs' filament, motion blur and explosions.

The light bulbs' filament and the explosion in the vat room are both dynamic effects. After many attempts to try to make a light bulb glow correctly, it was discovered that the most natural glow could be created by using both the glow texture as mentioned above in conjunction with the glowing texture. The attempts to simply attach a point light to the center of the light bulb resulted in the light being unnatural. A light bulb emits light from its filament and constantly flickers; a point light is unable to mimic this feeling. A tiny lightning effect arcing between the two filament holders however mimics this effect very well. The color of the lightning is then changed from blue to yellow, or green. The explosion in the vat room was actually a sphere emitting fire particles created with the fire effect. During the explosion the particles speed and emission rate are increased so it looked like a ball of flame growing outwards. The rate is then zeroed and the particles died out marking the end of the explosion.
Lightning effect in the light bulbs

The light bulbs' explosion

Motion blur was needed to create the feeling of focus and speed on the characters. Although Maya offers the feature of motion blur during render, this option would blur the whole scene which wasn't the effect needed as it would cause the focus on the character to be lost. To solve this problem the scene and the character that needed the blur effect were rendered into two different clips. The blur is then added to the character outside Maya. A program calculates how much of the previous frame needed to be included in the current frame to create the correct blur. Once the blur is completed on the desired character the two files are composited into one. This allows the character to have motion blur while the scene maintains its un-blurred form.
G. Rendering

The final step of the production process is rendering. During this step the models in Maya is converted into frames.

The film was rendered using Maya Software render. Maya Hardware render has limitations and was unable to fully render all the details and features of this film.

Most of the rendering process was simple. There were however exceptions. The light bulbs had to be rendered as a separate layer. The environments lighting combined with the light bulbs own glow made it too bright. The characters that used motion blur also had to be rendered separately. The layers that are rendered separately are composed together with the rest of the scene in the post production.
IV. Post production

Overall the post production of this film did not present a challenge and was relatively short in comparison with pre-production and the actual production of the film. This section of the paper will cover the composition and sound effect.

A. Compositing and Editing

Each scene was batch rendered on the department of 3D lab’s render farm into individual frames in tiff format. Once all the frames were rendered they were imported into Adobe After Effects to edit. Adjustments to the timing of the scenes were made to give the film a smoother feeling. A problem that was encountered at this point was the light bulbs. The scene’s lighting and the light bulb’s glowing filament made it too bright. To counteract this problem the light bulbs were removed from the main layer and rendered as a second layer. Using After Effects the light bulbs’ layer was composite with the main layer which did not have the light bulbs. Once all the scenes were rendered individually they were connected together to form a rough draft of the film. The connecting of the scenes was done by After Effect. The timing is corrected on the rough draft of the film. After the corrections had been made the whole film was re-rendered resulting in the final full length film without the sound. The film is then converted into a mov file.

![Edit at Adobe After Effect](image-url)
B. Music

In order to add music to the film, Roc Lee, a student of Houghton College was approached to be my composer. He composted the tracks for the film. Once I finished animating, a rough draft of the film was sent to Roc Lee who created the musical score for the film. The score was then imported into Adobe After Effects with the scenes. Timing was once again tweaked so the score and the film synced correctly. Finally a final version of the film was rendered.
V. Conclusion

I had walked away with more than just the technical knowledge of animation by embarking on the journey to complete this thesis. The experience and the hardship I had encountered while working on the thesis had allowed me to grow as an individual. The research I had done had changed my perspective on how important education and creativity is. The hardship and frustration I had encountered during the thesis showed me how to be persistent and vigilant at hard times. The difficult requirements of the project had taught me not to be stubborn when attempting a solution but rather I should take a step back when I feel I hit a dead end and seek out other paths. The vast amount of different task that had to be done taught me not to just blindly follow what the classes and the books had taught me, but to combine and mold the elements and the methods learned into what I truly need. Most importantly the time put into the thesis had taught me never to give up no matter how difficult and daunting the task seems.

Research was the first step of my thesis and it had opened my eyes to the importance of creativity and education. My education up to my college degree had been completed in Taiwan. The educational system back in Taiwan attempts to train students for tasks rather then giving them to tools to complete the task. The system does not openly embrace creativity but would much rather students memorize the methods and texts from the books word by word. The most disturbing element seen in the research is that the students do not realize that they have the potential to be creative and that I was once part of the system. Prior to the research I did not have a firm grasp on how serious this issue was. Essentially the majority of the students were turned into machines, parts, gears custom fitted for the industry they are made for. A lot of entrepreneurs in Asia are not Asians. This is because the students were taught to follow instructions, to go by the text, don’t think out of the box and don’t take risks. There wasn’t a lack of creativity minds but rather the minds are being chained down by the education system. This results in a lack of leaders being molded and ultimately weakens the country. This was the main driving force behind the creation of this thesis.

The journey of completing the thesis had also molded my personality. The path of completing the thesis was a difficult one. The tasks were often hard and frustrating. I would often get upset when I reached a road block. I would loose hope and consider quitting. But each and every time I kept on. Slowly the feeling of anger and lost hope disappeared. Working on the thesis had built up my stamina. I have realized fits of anger and lost hope will not get me any closer to my goal but rather to reach my destination.
I had to be persistent at working toward the finish line and I must maintain vigilant when facing problems blocking my path.

The way that I handle problems had also been improved by working on the thesis. I used to take the book’s and the professor’s teaching as the only way to approach problem. This was imprinted into the way think by the year of studying in Asia. During the course of working on the thesis though I encountered a lot of problems that were not shown in the book. This forced me to adapt the lessons, I had learned and mold them into solutions targeted at the problems. After time I understood that the lessons that I had were not trying to teach me how to solve a particular problem or complete a particular task, but rather the lessons was giving me tools to tackle the problems. The tools are there for me to use however I wish and could be combined with other tools to complete more difficult task. I didn’t have to follow rigid instructions of a book to complete a task; I could always come up with my own solution with the tools provided to me. The only limitation of what I would be able to create with the tools provided to me lies not within the lessons taught to me but my own creativity.

Lastly I learned that I should never give up. Two years is a really long time. Throughout the two years I had encountered many set backs, however in the result at the end was worth it. I had doubts on whether or not if I was putting in too much investment on this thesis. This thought melted away when I saw the reaction of the audience, when I heard their comments on the film. I feel that I brought an issue of great importance to the attention of the intended audience. They understood the importance of creativity in education. If I had given up prior to the thesis’s completion, none of these would have been achieved and all my prior investments would had gone to waste. Once a project is initialed one must not give up or all the investments that one placed onto the project would mean nothing.
VI. References

Books:

<Learning Maya 5 Character Rigging and Animation> by Bill Dwelly, Lee Graft, Cory Mogk, Damon Riesberg, published at 2003, USA

< Learning Maya 6 Modeling> by William Dwelly, published at 2004, USA

<Facial Expression> by Gray Faigin, , published at 1990, USA

<Stop Staring> by Jason Osipa, published at 2003, USA

<The Animator’s Survival Kit> by Richard Williams and Imogen Sutton, published at 2001, USA

Website:

http://www.highend3d.com/


http://www.3dtotal.com/

Toolbox:

Adobe Photoshop, After Effects, www.adobe.com

Maya, www.autodesk.com
Appendix A

Original Thesis Proposal
Title: JACK
Producer: Han-Yi Tseng
Budget: $817.30
Start Date: Summer 2005
End Date: May 2006
Running Time: 5 Min.
Release Format: DV, VHS, DVD

Story:

A young creative boy Jack attends school and attempts to fight off the authorities as they try to ban his creativity.

Synopsis:

Young boy Jack is sitting on his bed with a crayon on his hand drawing many pictures. His room is covered with pictures that he has previously drawn. Everytime Jack draws a picture a light bulb springs out on his head.

Jack’s parents send him to school. A teacher greets him with a big smile and shows him his seat then proceeds to talk with his parents. Jack looks around the room and sees two giant glass vats sitting at the back of the room. One is empty the other one flows with gray bulbs. At that moment the door closes and Jack’s parents leave; the teacher’s smile disappears from her face and she tells Jack to sit down and be quiet.

She takes out a tag with Jack’s name on it and pins it on his chest. She then walks to the front of the room and starts a boring tape. As the tape plays, the room turns black and white. Large syringes connected to tubes fall from the top of the ceiling and implant themselves on the back of the necks of all the students. The syringes start pumping ideas out of the students and gray bulbs into the students. Jack does not see this happening. Jack listens to the tape for a while and raises his hand. As he does so, light bulbs spring into being from his head. The teacher tells Jack that he may speak, but becomes very angry at what he has to say.

The teacher walks over to Jack and starts hitting his palm with a stick. She then takes a large scissors and cuts off all the ideas from Jack’s head. Jack sits back into his chair with tears in his eyes.

The next day while Jack walks to school. He sees that the garbage bin is glowing brightly. He looks in it and sees a lot of glowing light bulbs. Entering the class, Jack sits bored listening to the tape for the few minutes; the teacher is away. He turns to look at
what the other students are doing and is shocked seeing that there are two syringes: one pumping the school’s idea in, and one pumping the students’ ideas out, attached to the base of the neck. The student is fading in color. He turns around and sees that it is the same for the other students and aside from the colors disappearing from them. Their expressions and facial features are also draining away and the whole class looks like clones of one another with only the name tags on their chest to distinguish them from each other. He feels the base of neck and finds that the syringes are there too. He looks at himself and finds the colors fading from himself. He tries to think up some ideas and a light bulb springs into existence.

But the light syringe begins shrinking with each time the syringe is pumped. He yanks the tube out of his neck and looks around the room for the source. He sees the vat that is empty in the beginning of term is now filled with students’ ideas. He runs over and examines the vast, finding a dial. He twists it all the way and the vats shake and start pumping ideas back into the students’ heads and the gray bulbs out of them. Students’ color slowly changes back and soon they are talking and laughing at each other.

The teacher comes back in and is shocked. She quickly turns the dial back and yells at everyone to be quiet. She stares at Jack and tells him to return to his seat or she would tell this to his parents. The teacher then takes out some chains and a lock and locks the dial on the vat. At the end Jack gives up and sits down bored listening to the lecture.

At night Jack sits on the bed drawing. Everytime there is a light bulb he picks it up and puts it in a box. He hides the box before he goes to sleep.

One school day Jack brings the box of ideas with him to school. He carefully unplugs himself when the teacher does not paying attention. He yanks the tube from the syringe connected to a student’s neck and pours his ideas into the opening. The ideas slowly flows into the neck of the student and he starts becoming more colorful and a smile spreads from across the student’s face. The teacher sees what happened and rushes over to Jack and slaps him on his face yelling at him. She takes the box of ideas and shatters it on the ground. Jack started crying.

At night the parents has received a call from the school and yells at Jack. They take away his crayons. Jack is left in the dark alone.

The next school day he sits and listens totally bored he starts scribbling at the piece of paper in front of him the words “Once upon a time….”. Jack smiles as the paper starts to glow faintly. The screen fades and ends with “The End” in Jack’s handwriting.
**Approach:**

This will be a 3D animated film in Maya. The style of the characters and the set will be simple, cartoonish with slightly more details put into the main characters. The main focus of the film would be the animation of the characters and the shifting of the colors and light. Sound effects would be recorded. Music would be mainly repetitive and boring to bring out the Jack's feeling when he is in class. Like wise when there is some tense event that Jack is in the music would reflect how he is feeling. I will use the Eastman School of Music to advertise for the position. Composition would be done in After Effect. This film is estimated to be completed by May 2006. Expected time would be 5 minutes.
**Thesis Timeline:**

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<th>Week</th>
<th>Pre-production</th>
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| Contingency     | $74.30             |            |          |

| **Total**       | **$817.30**        |            |          |
Appendix B

Complete Storyboard
Appendix C

Color Prints
Appendix D

Credits
A Han-Yi Tseng Film

<JACK>

Modeling/Animating/Lighting/Rendering/Compositing:
Han-Yi Tseng

Animating Assistant:
I-Hsiun Fu

Music by:
Roc Lee

Advisors:
Malcolm Spaull
Skip Battaglia

Special Thanks:
Chen-ni Hsu
Hiroki Sato
Jiunnfu Su
TungTe Tsao
All friends

Student Produced
School of Film and Animation
Rochester Institute of Technology
Rochester, NY

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