Lupita looks up

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Lupita Looks Up
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After Dogfood and Lollipop, there were still some ideas that I wanted to explore especially those of how a child reacts to the world outside. In my notes, I have written down some goals. Ideally, Lupita Looks Up should not be a break from my past work, but an evolution combining the power of Dogfood with the sophistication of Lollipop: It should be a personal and purposeful film; It should invite analysis and not fall into the pitfall of the clumsy and the obvious, which plagues a lot of existing children’s film. It should also reveal its secrets slowly and gently, and at the same time celebrate the power of the mind.

• **TO TELL A STORY I - LUPITA**

After weeks of frustrations and tons of discarded ideas, I finally arrived on a story that I liked. It was a morality tale: no matter how many new toys one has, one could never be satisfied. The first draft of the story involved a floating television that visited the children everyday promoting the newest toy. The film ended with Lupita (was temporary named Alice in the proposal) cried herself to sleep under the moonlight. The imagery was dreamlike and I felt that it would make up for the somewhat predictable story.

However, deep inside both Skip and I were not happy about the story, especially the ending. Lupita’s struggle failed to pay off and thus rendered the whole film pointless. Also, The presence of a television took away the universal appeal I have intended. The story of Lupita should present a problem that could happen anytime and anywhere. Despite the doubts, I went ahead and started the production, hoping that a solution would come to light. Meanwhile I had a lot more on my mind, such as how to model the characters and not get trapped in the pitfall of many other independent 3D animation – allowing the technology to take over the production.

• **MY FEAR OF 3D**

The common impression of the goal of 3D animation, which has somewhat remained the same since it’s conception in the early 70’s, was to mimic reality. Early computer animation was predominantly produced by computer scientists. The algorithms were so complicated that only super computers could tackle the tasks. Throughout the years the
plummeting price of computers and the advance in chip technology allowed everybody who has a personal computer to dabble into animation. There are now off the shelf software that is affordable enough for your average hobbyist to purchase at the price of a hard cover novel. An amateur can now accomplish what took 10 programmers a week to do 30 years ago in an afternoon.

Printed on brochures or the box of most computer animation packages were the words special effects, raytracing, radiosity, inverse-kinematics, polygons, nurbs, B-splines, and automatic fly-through. These features, the software maker promised, were the same as those used by the Hollywood movie studios. In their promotional reels, Softimage have featured 45 minutes of exploding spaceship, lens flare, faintly lit corridors, monsters lurking in the dark, and gorgeous human faces completed with eyebrows and mustache. The advances that brought about a brave new world of filmmaking were going to allow us to do things that nobody ever imagine possible 10 years ago. Everybody can create their own special effects that looks as good as the dinosaurs in Jurassic Park. What the promotional material failed to mention was how many weeks was required create even five seconds of these visual candies. Not to mention how much of the work was not done by the animator alone, but also with the help of professional artists, graphic designers, engineers and programmers.

When I started making Dogfood, we were all very excited about our new 3D software package Alias/Wavefront PowerAnimator (PA). We also got 20 bright and shiny Silicon Graphics workstations to run the software with. Naturally the thing to do is to follow the example of the tutorial and to create realistic human figures for our first movies. During the period, I was put on a tight deadline. The only concern was to finish the film within 10 weeks. I was impressed by George Nadeau’s Nightlight and Curt Markham’s Parking Space Limited. Both of them were very straightforward with no bells and whistles. The animations were delicate, effective, and to the point. I laughed when the lady in the checkered dress races the incoming car. I cried when I saw the hand of the tall figure in Nightlight pull his heart out in the dark. That, I told myself, was some good animation. I believed that I could do the same with PA because it just looked so easy.

However, during the period I have seen even more animation that didn’t work for me at all. At numerous screenings, both inside RIT or at some film festivals, I have seen a lot of animated shorts which undoubtedly have a place as an technology achievement, but behind the curtain of flashy render algorithm laid a hollow, barren landscape devoid of
feelings. The major problem I saw in computer animation involves the belief that more animation equals good animation. Their character is constantly in motion, even when there is no reason for him/her to move or when the focus of the shot is on somebody else. Some of the actions didn’t have a precise ending, and the motion just lingers on until the next different set of animation kicks in. Others believe that lip-sync is an essential part of the character that it has to be done in any cost, even when there were other obvious animation glitches that could use a lot of fine-tuning.

During my years in RIT, there was no technical education regarding special effects given here in the department of Film/Video/Animation. Students in the MFA program were not trained to deal with the problems posed by the demanding world of professional special effects. PA was undoubtedly a very powerful application and some of us have created wonderful animation with it. However, when I was making Dogfood, I had spread myself too thin. In the process of trying to get every texture and light exactly the way I wanted it, I have misplaced my priority neglected the most important aspect of the film: the animation. The degree of technical difficulties I have to deal with far exceeded my expectation. For every problem I fixed, two other problems would seem to appear from nowhere. The constant render and re-rendering took away precious production time as well. At the end I only have two weeks to animate the whole film. As the deadline approached I cut together the half-animated scenes and slapped on a simple soundtrack in a hurry. The film was a disaster. It was too long, the motions were robotic, and there were many failed moments that could have been magical.

Another reason why Dogfood failed is the lack of feedback. Not educated as an artist, I have no experience with critique, and thus shy away from them. Not showing the rushes to my peers proved to be a fatal mistake because most of the time I was too blinded by the work and neglected the fact that the ultimate goal of a film is to entertain the audience. Without their advice, I have no way to gauge my progress. Sometimes help could be as close as the person sitting next to you could.

After Dogfood, I went through some rethinking and re-evaluation of my mistakes. During the period I gained additional experience by finishing Lollipop, my third animation. I also went to several animation festivals and browsed through libraries of independent animation to investigate the possibilities for my next movie. In the winter of 96, I wrote the story and started the production of Lupita Looks Up.
• MODELING

My first and foremost concern was how to model the character so that it would be easy to animate and at the same time visually pleasing. The limited time and computer power at my disposal was judgmental toward my style of modeling. Comparing to puppet animation, modeling was the equivalent to crafting the puppet from scratch material. Simplicity was the main goal. Inside the PA tutorial was a chapter on how to construct a realistic human model. It was meant to be a demonstration of the power of PA, which was capable to generate very realistic 3D models. Many of us created their characters using the method from the tutorial. However, I found the complexity of such models overwhelming.

The basic unit of how an object is represented in the computer was a triangle. A cube was composed of six squares, which was in turn made up of two triangles. A model was made up of tens of thousands of polygons. The more polygons you have, the more calculations the computer have to do, and the slower the screen redraw. With a puppet, the animator could adjust the position and posture, then record the moment in a frame of the film. However, in computer, the delay could be so bad that sometime I felt like I was manipulating my character inside a bowl of Jell-O with a pair of chopsticks. In some extreme cases, the delay between the action and the visual feedback could last several minutes. Imagine an artist who has to wait 5 minutes before he could see a stroke appear on his canvas. This was unacceptable.

After the fiasco of Dogfood, I decided that problem of such delay would be a major obstacle. So this time around I started to create a workable model, one that was based on a simple yet personable design. I borrowed heavily from traditional Japanese Hina Dolls. Which were gifts given to children by affluent parents when the children reached puberty. Meticulously handcrafted and decorated with layers of lavish kimono, they represented blessings that were only available to the children of the nobles and the rich. Even in the modern days, Parents of the lesser means usually have to make do with substitution dolls made with paper instead of silk. The background story associated with the dolls was a pleasant surprise because it mirrors the theme of Lupita’s problem.
Aiming for the elimination of excessive complexity, I replaced the geometric face with painted ones, similar to the faces on troika dolls. As an early test, I painted two large black spots on the head to represent the eyes. They worked pretty well as an abstraction of a face and soon became the final design. Also to save labor as well as to establish the unity of the world, I copied the same head and use them on all the characters. Since I did not share the common American passion of lip-syncing, only a hint of the noses and the mouths were given. The simple faces gave my characters a rather doll like appearance. Other reduction includes only four fingers for each hand, no dynamic blends on the shoulders and a single geometry for each leg.

- **TEXTURE**

I made up for the drastic simplification of the models by investing into detailed texture mapping. Before I started, I did some research on costume over the various period of Chinese history. Not long after I proposed the project, I enrolled in Charles Collins’ graduate level Oriental Art. It opened my eyes to the enormous wealth of ideas and artistic vocabulary of the Chinese Culture. I was particularly attracted by the subtle and layered scenery from the ink painting of Sung Dynasty, which I later used as templates for my backgrounds on. The female custom of the Ching Dynasty (1650 - 1890) combined the best of the ancient craft of textile and the sensibility of a modern fashion. I borrowed heavily from the decorative buttons and applied liberally the colorful embroidery along edge of the sleeves and the dress. On the outfit of my characters, rings of gold and black guild the audience’s eyes around their body and stopped at the hands and the neck, where most of the animation occurred.

For the interiors of the house I used a warm and gentle palette with shades of pastel pink and green. The rooms were decorated with lightly tinted paintings and accessories to break-up the monotony of the walls and the corners. I had a lot of fun decorating and spent days arranging the toys in Lupita’s room. For the outdoor area I used primary cream and light brown to give the world a feeling of a lazy Sunday afternoon. In contrast, the girls themselves wore colors of high value which helped bringing them out form the background and keeping the audience’s eyes on them.

After several days of failed attempts, I abandoned the idea of directly applying the scanned images of the clothing onto the models. The difficulty of wrapping a bitmapped
texture onto a 3D model was similar to wrapping a newspaper article around a basketball but in the meantime making sure that every word was still readable. During the summer of 97 I spent 4 weeks struggling with StudioPaint, a 3D painting program that came bundled with PA. It allowed the user to paint directly on top of the model. The texture was translated in real time onto a flat image, the way a globe was flattened into a rectangular world map. The idea sounded promising, yet the underlying mechanisms proved too complicated for Alias engineers. StudioPaint itself featured an archaic user interface, where all the tools were placed in the most illogical places the designer could think of, and at the meantime other palettes with incomprehensible functions scattered all over the screen. There was a strong sense of Alias engineers designed the program differently simply for difference’s sake, perhaps to avoid patent infringements.

The mouse was also a bad choice for the job. If you have never painted with a mouse on the computer, try image yourself painting with a brick. No matter much energy you put in, the result would always be mediocre at best. Also you didn’t have control over any variation of transparency and size of the brush. With some creativity, I could archive some degree of sophistication with the airbrush tool. But any detailed work was close to impossible. The fact that StudioPaint was a broken application didn’t help either. 3 hours into painting the outfit of Lupita, a black patch the size of a poker card appeared on the main canvas, covered up a sizable portion of what I just painted. Not only did StudioPaint corrupt my work, it had also overwritten my backup also, and I have to start all over again. For the rest of the day, the battle with the mysterious black patches raged on while, gradually, other problem joined in. The texture on the model no longer appears on the flat version; the paintbrush switched size without warning; Color disappeared from my palette; the eraser tool refused to erase. At the end of the week I surrendered and bought Painter 3D.

FractalDesign has revolutionized the field of computer art with their flagship program Painter, featuring tools that mimic actual brushes used by artists. The watercolor, pencil and oil brush worked just like the real article. It also came with an assortment of fancy add-on brushes that let users create exotic effects like mosaic and liquid metal. Painter 3D has all the tools available in the original Painter, plus 3D support that let me paint on an imported object, just like Studio Paint. The difference is that Painter 3D worked as promised without giving me any grief.
In PA I exported each individual component to of the characters into separate files. Then I
opened them up in Painter 3D, painted the texture and saved it. It did take me a couple
days to figure out how to bring in the resulting image from Painter 3D into PA and made
them align. Just like the way when I wrap a world map around a basketball, I have to
make sure that North Pole is on the top. Again, when it came to dealing with computer,
nothing was spelled out directly to you. There was always a solution that was waiting for
the user to find out.

By the end of fall 97, I finally have all the texture ready, including those of the furniture,
wallpaper, toys, rugs and kitchenware. In Dogfood, I have created a flat world by
outfitting an outdoor area with gingerbread-style objects. Trees, fences, houses and even
clouds were flat slab of painted surfaces. This time around I used a similar concept and
picture the indoor as if it is a dollhouse. I enjoyed the marriage of simple childish line
drawing in a computer generated block world, as if my characters were running their
everyday life inside a snow globe, where every object resembles a toy or a cookie. Happy
with the look, I proceeded to the animation.

- **ANIMATION**

To describe the joy and pain of animating was like describing the flavor of a fine wine. I
could tell you a 1994 Columbia Valley Johannesburg Riesling have a bold, nutty flavor,
with a slight hint of raspberry. But if you have never taken a sip of any wine at all, you
would never have understood what I was talking about.

I came to RIT at the fall of 95 with only a very vague idea of what I wanted to do. Like
the rest of my little group of hopeful animators, I started taking classes according to the
curriculum. Not many of the classes we took were helpful toward animation. But my
classmates enjoyed their Multi-media, computer languages, and web page designs classes.
For me, the real treat was the drawing and animation classes. The desire to draw was deep
in my blood. Since Kindergarten, I have been doodling whenever I could find a pen and a
clean surface. After years of studying Science and mathematics, I found myself sitting in
an RIT classroom learning how to make little pictures move under a camera. Imagine my
excitement when I saw my first animation being shown in the class along with everybody
else’s.
During the next 2 years we were rushed through 78 credits of classes and each made 2 movies. I have always been ambivalent about the production classes. Within 10 weeks, we have to a film that was animated, contained a soundtrack, and told a story. Instead of polishing our skills as animators by giving us smaller scale clips to animate, we were forced to deal with the issues of full-scale render, sound effects and editing, each requires the skills of a computer programmer, a digital audio engineer and an editor. These extra burdens eventually forced us to minimize our time for drawing and animating but instead concentrate on the skills and logistics of how to put together a movie, all within 10 weeks.

After the failure of Milk, my first animation, I proposed Lollipop with Skip. My goal was to give myself more time so that I could animate in a more leisure pace. When Lollipop was finished, I learnt one thing: Animation was fun! After spending hours and hours drawing, I found myself developed a relation toward my characters.

Meanwhile I felt that there were overwhelming issues related to the design and characterization that I didn’t understand. I started turning to art and animation books for inspirations. “The Illusion of Life” was undoubtedly the must-have reference for everybody who was interested in the world of animation. Olle Johnson and Frank Thomas did a wonderful job covering all aspect of the world of Disney animation. From life inside the Disney Studios to the principals behind animated filmmaking to the frustration of failing to capture the intended audience to the joy of seeing a stack of drawings come to life on the big screen. Another useful title was “Digital Character Animation” by George Mastri. The most useful part of the book was the tutorial on how to translate the traditional cel-based animation technique into the world of computer 3D graphics. Through several application-independent exercises, George demonstrated the limitations and the pitfalls of computer and 3D animation, and ways to overcome them.

My immediate reaction after reading Masteri’s book was how little I knew about 3D. It turned out that in a professional environment, the animators didn’t necessary have very powerful computers. Their solutions to the reaction-delay problem was by using stand-ins, which was a representation of a more complicated object made up with simple cube and spheres, the animators could have instant feedback of the actions they recorded and could review the animation in real-time. After they have got the proper action and rhythm, they went ahead and “swap” the detailed model into the animation by copying the animation. Sadly, although there was a copy animation function in Studio, it seldom
worked the way I wanted it to. I did spent 2 weeks creating stand-ins for all the characters in *Lupita Looks Up*. I stopped animating the stand-ins after several days when I discovered that the transfer of animation was extraordinary difficult. It was straightforward to animate a skeleton just by recording the position in individual joints. However, upon copying the animation, nine out of ten times there would be some sort of errors. The most common problem was part of the animation was not copied. This usually happened to the finger and toe region. Within the two weeks of my stand-in testing period, I have ran into ten or more instances which after the copy operation, a limb or a finger or Lupita would either vanish or have an impossible property, such as an infinite distance from the parent joint. There was no explanation to why the above happened except that it was a badly implemented function in PA. The only thing I could do after the mishap was to restore an earlier version of the file and redo the process again, hoping that it would work the next time. Compounding the problem was the fact that the copying function was extremely time consuming. A typical keyframe copy of skeletal animation could takes from about fifteen minutes up to two or three hours. I spent more time waiting then animating. This was unacceptable.

After deciding to give up on using stand-ins I made some calculations and decided that direct animating of the final models might be more time consuming, but the total lost in time was manageable because of my highly simplified characters. Borrowing the ideas from Pixar Studio, I first made an ad-hoc version of a timing sheet before starting each scene. Unlike traditional frame based animation, I only need very little information before starting to animate. I made simple gesture drawings of the key poses of my characters. Under each pose I write down an estimated time and duration of that particular action. Then I opened up the scene which I have already set up earlier and start the process of animating. The precise timing was to be adjusted later in PA after previewing the action. I spent the majority of the time doing “trial and error” within PA to archive the right timing for my characters. But keyframing also requires lots of patience.

For every key pose, I manipulated Lupita into my desired position, then I captured the moment by recording every position of the joints, or setting the keyframes. Even if at that particular time there was no change in position of a joint, the position was re-recorded. This differs from the method suggest in the PA tutorial, which emphasis a more engineered approach by recording the position of the IK handles and by copy and pasting the keyframes. IK handles were invisible objects that animators could attach to the end of a skeleton chain, usually a limb. From the position of the IK handle PA could calculate
the rotation of each joint along the whole skeleton. IK handle was a time saving tool that
cuts down on the amount of keyframes and that many animators swear by. However, I
found the result of IK animation to be rigid and artificial. One of the reasons has to do
with the principal of follow-through.

Lupita has very delicate actions. When a she drags her hand, the shoulder moves first.
Then the force propagates along the arm to the elbow and then to the wrist and fingers.
When she lifts a hand, the order of movement was reversed. Keyframing the IK handle
forces all the joints move and stop at the same time. There was no overlapping action of
any sort. The result was a mechanical feeling that reminds me of a robot. The difference
may be subtle, but even a tiny variation of the order would result in different meaning in
the action.

Another headache for me was the number of joints on the character’s hands. The
characters in Lupita’s world have 4 fingers on each hand, which translates to 12 joints
below each wrists of each character. Since I did intend to finish the film before I reach
retirement, I have planned from the beginning to limit the number of animated objects. In
PA, there was built-in support for pre-programmed function that allows the properties of
one object to change according to the properties of another. I wrote a set of expressions
that allows each finger to go from a curled to a straightened up position following the
height of a set of sliders, which were basically invisible curves. This way I only have to
deal with 8 sliders for each character instead of 24 joints. The best part was when no
individual finger movement was needed, I could save even more time by keyframing all
the sliders at once, something I cannot do with joints, which has to be dealt with
individually.

Every key pose I choose has to be deliberate. The slower the character, the harder it was
to decide what to do with all the space between two actions. One characteristic of 3D
animation was the dead-space problem. To the audience, as soon as an object stops
moving, it would lose all its charm and would become a mannequin. It has something to
do with how the human eyes perceive life. Even if they were not doing anything, a
character would display some sort of movement. They blink. They shift their center of
gravity from one foot to another.

On the other hand, action scenes such as those when Lupita was running benefited the
most from the preview capability of computers. One of my usual problem was the
movements of my characters were too slow. By adjusting the distance between the key poses, I could speed up the action until I saw something I liked.

Not long after the animation started, I realized that each of the characters in Lupita Looks Up needed to be more clearly defined. I know Lupita was the average 5-year-old child who was full of curiosity and very energetic. Her actions should bring out the innocence and shyness of a child. That would pose no problem because deep down I know she was just another incarnation of my baby cow character. But what about Mom? And what about her friends Cap and Buns? It become clear later as I animated more that Mom should be a dampening force on Lupita’s desire, her movements should be the opposite of Lupita: reserved and graceful. While Lupita was running around trying to do several things at the same time, Mom concentrates on one thing and one thing only: stirring the pot of soup on the stove. She was satisfied with what she have and doesn’t want. She should move slowly but accurately. Her every action was thoughtful, as if she has a lot on her mind. But also she should be very attentive to what she was doing and take every step carefully. She was the embodiment of reason, as opposed to Lupita’s chaos.

Cap and Bun were also quite different. Cap was the more mature one. Although quite active and fun, she pales compares to Bun. Bun was the loopy one. She bounces, she giggles, and she loves to tease. They reflect the typical well to do kids I met when I was a teenager. They were popular, they receive high grades, and they seemed to always get what they wanted. I had a lot of fun animating them.

• RENDERING AND THE LOOK AND FEEL

Regarding computer animation, I am an advocate of looking beyond the realm of photorealism. I am not saying that that realistic rendering was less expressive medium. That was like saying that a Van Gogh was superior to Rafael. After seeing much student computer film that looks similar, I come to believe that one should differentiate himself and explore different possibilities in animation art. The popular detailed, highly sophisticated lighting and texturing were usually very taxing on the technology and were generally labor intensive. At Pixar, the studio that created such hits as Toy Story and A Bug’s Life, it takes a staff of 50 people a week to finish five second of animation. There was a general idea that computer animation equals special effects. I, as an independent
filmmaker, could not afford this kind of luxury. However, I could took advantage of computer’s power to produce a traditional animation with far less time then it would take ten years ago.

Cleverly written and very well animated, Nick Park’s “Wallace and Gromit” series have left a strong impression with me since I first saw it two years ago. Seeing how Park pulled together a film with clay and toy-like background have inspired me to attempt to emulate the look of a stop-motion animation in Lupita Looks Up. In PA the cameras came with a full set of options which allowed the user to mimic the working of a real camera. After some experimentation, I found the right values for the focal length and adjusted them accordingly. When shooting puppets, because of the small size of the stages, the cameras were usually positioned close to the characters and thus gave the foreground and the background a very different focus. Because of the soft background, The film constantly reminded the audience that they were looking at a very small world which has just came alive. After applying the technique with PA, I found the result visually appealing. It pushed the primary character into the center of attention and at the same time took away that typical computer render look where everything was always in focus.

- TO TELL A STORY II – THE FLYING COW

After I have created the floating TV in the winter of 1997, It became very clear that the design was too futuristic, and it just didn’t belong to the scene. As an experiment, I replaced the TV with a model of the flying cow. When I saw the render, I knew the solution: Keep it simple. The closest distant between 2 point is a straight line. If I want the kids to see a new toy, all I needed to do was to bring in the new toy. Thus the TV was eliminated in flavor of a floating giant toy, completed with flashing signal light and a deep booming sound effect.

But I was still troubled by the lack of a good ending. The big break didn’t come to light until the fall of 1998. After seeing a very early compilation of rushes, Howard suggested that a viable solution was to give Lupita satisfaction with her old toy, which comes in the form of Lupita’s understanding that the pile of older toys in her room could also bring some fun and joy. Working with tremendous speed I animated the suggested four extra
shots in three days.

Skip and I looked at the cut and agreed that it didn’t work either. The idea was sound and solid, but the cut just didn’t carry the joy that was intended. After Lupita came home with the flying cow, she sat by her desk and sighed. The cow came to life, flew to the end of the room and start playing with the pile of old toys. At that magical moment, Lupita discovered the fun, jumped up and joined the party. Off the camera, we could hear her laughter mingled with an ensemble of sound of other toys. If the shots were magical, the cut was not. The toys were rigid and the shots were confusing. It was really hard to portray toys as they were having fun together without adding another three months of work into my already late schedule. I would have to model the cow differently from scratch and add many new toys. So we moved on and went back to an earlier ending that looked promising.

Accidentally, it was the editing decks that lead to the final decision on the ending. Earlier, I have scraped 6 completed shots in favor of a more tightly knitted story. Moving the shots around behind the editing decks, I stitched two shots together by chance: one where the cow on the desk came to life, flipped her ears and started flying; the other one showed the camera pulling back from outside the house while Lupita jumped up the desk and marvels at the floating TV outside. When Skip saw this, he turned and gave me the familiar grin, which mean he had another brilliant idea. It turned out to be more than that. After looking at the cut again, the meaning of it jolted me like a thunderbolt. Of course! The toy came to life and flew away, just like her problems. But flew away to where? Reading my mind, Skip completed the sentence: “To her mother.”

- THE FINAL TOUCHES – SOUND AND EDITING

If I know anything about music, I would not have started the production of Lupita Looks Up until I had a soundtrack. However, judging from my contemporaries’ experience and the fluctuating nature of the project, I’ve decided to stick with the visual and let my soundman worry about the audio. In the middle of production I lost contact with my sound designer Micheal Feldman. After seeing PoV, John Yung’s excellent thesis film, I invited Zak Margolis to jump onboard. Being a man of many talents and professions, Zak managed to fit me into his tight schedule. At the end of summer of 1998, two months before the screening of Lupita, I turned over to Zak a very rough cut with many holes and gaps. During the last month of production, when I was rendering my footage in a frenzy,
Zak has kept his professional courtesy and was extremely patient with my constant demand for re-edit. At the end, he not only have contributed some very beautiful music, a library of sound effects (built from scratch), many hours in front of the computer just to sync up the sound, but also a lot of helpful advice on how to edit and how to manage my stress.

Having no film experience, I found the final step of editing all the shots together into a complete film was a major challenge. Like mathematics, knowing all the rules doesn’t equate to knowing the solution. Since my three last movies have all been suffering from the problem of being overly long, I have taken an extra measure to make sure that it would not happened again. I brought in the expertise of a seasoned editor, Skip Battaglia.

Skip inspected my cut in the Avid-Editing suit the day before the equipment was shut down. Because of the non-linear nature of our new AVID machines, we could experiment infinitely with different ways of cutting and splicing. When I made a mistake, or if something doesn’t look good, I just simply push the undo button, and the cut was reverted to its earlier state. The AVID was also great for trimming out the frames from a rough-cut.

Finally, after several days of fanatic editing and 24 month after production started, Lupita Looks Up was ready for her premier.

• REGRETS

At the beginning, it was simple. We have to make a film that was three minutes long that have a soundtrack. It didn’t sound that bad at all. After all we all have produced two previous animated shorts (three for me), and they were all finished within twelve weeks. Nevertheless it didn’t take long before I realized that the puddle was really a lake.

The thesis was our final film before we left RIT. Everyday we worked hard in the labs and tried to create something: Something that could bring us awards in film festivals; Something that could impress the audience; Something that could prove that we were graduate students; Something that could live up to the tiny lines at the end of the credit that said “submitted as partial requirement of a Master of Fine Arts.” The thesis film
should be an A-bomb that makes a bang. After all, this was supposed to be the fruit of seventy eight credits of animation/multimedia/programming classes.

Worse, the thesis film would be our ticket to the lucrative job in the animation field that everybody has been dreaming about. Most of us wanted to work in the entertainment industry with the knowledge and experience obtained in RIT. Since the animation from our thesis movie would make up the bulk of our demo reels, it has to be absolutely the best. Thus we were under tremendous pressure to produce the most spectacular film we have ever made. Although, I was not comfortable with the idea of making a movie in PA, after some consideration I went ahead and anyway. The fear of not finding a high-tech job was overpowering. I did not foresee that it would take me two and a half years to finish the film.

Once the proposal was written, it was time to sit back and figure out the logistic of the process. three months into production, “What was I thinking?” became the common question. Although I had taken precaution to avoid complications, I was still behind schedule. The reason for the difficulty to focus was probably because, unlike the traditional pen and ink animation, there was so many different things we could do with PA. Once I strayed from the course and gave into the urge and added more elements, it was hard to turn back. There was never enough time to learn everything that was associated with 3D animation. The more complicated the scene was, the more potential problems might occur. I could safely say that half of the time I spent were wasted in experimentation with lighting and camera rather than animation. The only solution was to stay focused on what I planned but not what I wanted. In my case, I need lots of external help to keep me from straying. If I have bring in my thesis committee closer to the project, Lupita Looks Up could have been completed much earlier.

The job of a faculty advisor, as I see it, was analogues to that of a film producer. He kept an eye on the resources and prevents the student from going off the sideline. Sadly, it was up to the student to determine how deep the thesis committee should be involved. It was very hard for a child to show his parent the term paper that carried a big red F on it. Sometimes I waked up from the frenzy of production and realized that it was time to talk to my committee. However, once realize how far behind I was, I would try to delay or call off the meetings. The pressure was also on to walk in a meeting with some good results. At the end, nobody from the faculty has seen my rough-cut until it was too late. Luckily they did not abandon me. Towards the end it was their insightful advice and help that got
me through the ordeal of editing and screening. I hope in the future that we thesis students could receive more pointers on how to treat faculty members and get the most out of our thesis committee.

**HOPE**

Making an independent animation was like writing a personal essay. In the process, the film taught me something about our life. However, the teacher could only serve me when I trust in my vulnerability. A seed cannot perform the miracle of growing into a new plant until it was released from what encloses it. During the search for the story, I have to dig deep into the experience of my life to find the seed from which to write about. In doing so, I learnt something about my circumstances and myself: Lupita was my first attempt to make a personal film that reflected my own experience. By making a film, I filtered what I saw, hear, taste, smell and touch into a form that was easier to digest by a mass audience. I hope through *Lupita Looks Up*, they could learn something about me, and maybe something about themselves also.

As an audience, I was deeply moved by ingenious student animation like George Nadeau’s *Nightlight* and Chuck Gamble’s *Shadow Puppet*. They have proven again that it didn’t take a lot of high-end 3D effects to create a legacy. Special effects will be displaced by newer technologies. A good story was here to stay.

The animating process was a long, arduous one. Without the encouragement of my faculty advisors and friends, it could never be done. My dear friend Zak Margolis, who have produced a beautiful soundtrack to go with the visual in very short notice, has also given me tremendous support during the last days of production. Howard Lester and Charles Collins gave me their encouragement and ideas. They led me to explore the possibilities and helped brought the film into the next level. I am forever indebted to Professor Skip Battaglia, whose good sense and good humor shaped *Lupita Looks Up* into its final form. Even after working together on several films, I was still amazed by at the tremendous value of his new ideas. But, alas, one was never prepared to take genius granted. Finally, I would like to thank Eliza Luk for her support. Without her love and cherish, I would have given up long time ago.
APPENDIX A
Thesis Proposal
Treatment

My thesis project will be a 3 minute animated film.

Synopsis

Alice receives a green elephant as a gift from her mother. She runs outside to show her friends the new toy. Her two friends, noticing Alice and her green elephant, giggle and point at a large monitor floating in the sky. Showing on the screen is a commercial featuring a pink doll. Alice, seeing that her friends are both holding the featured pink doll, pouts and runs back home. Alice goes to Mom, points outside and demands the new toy. Mother takes a glance outside and is annoyed. She knocks playfully on Alice’s forehead and returns to her cooking.

Alice goes to her room and sits down in front of her desk, wondering what to do next. The room is littered with books, magazines, videogames, computer disks, and many stuff toys. Posters and photos cover the walls. Alice looks outside and sees, on the floating screen, images of children with dollar bill entering a toy store and exit holding new pink dolls. An idea strikes! Alice runs out of her room.

Alice squeezes between Mom and the kitchen sink, trying to wash the dirty dishes. Mom drags Alice away and urges her to play outside. Alice takes out the vacuum cleaner and uses it on every corner of the kitchen. Mom picks up Alice, drops her outside and closes the door. Alice, not giving up, starts painting the whole house with a huge brush. Mom ignores Alice when she peeks inside. Alice comes back in and keeps herself busy in the house while Mom continues with her cooking. Finally all the noise dies down. Mom peeks in Alice’s room and discovered that the room has been cleaned up. The posters are gone. The books are back onto the bookshelf. Everything in the room is tidy. Mom is deeply moved.

Alice goes to her friends, proudly displaying her new acquisition: a pink doll. However, the girls once again giggle and point at the sky. Showing on the screen is a parade featuring orange dinosaurs, the new toy in vogue. Alice looks at her friends and then at the orange dinosaurs they are holding, not knowing what to do next.

Night arrives, Alice, carrying a sad face, sleeps with her orange dinosaur. Outside, stars and moon travels across the night sky. The huge screen drifts by, still showcasing the orange dinosaurs. Suddenly the pictures are replaced by signal noise, and then by images of a group of dancing unicorns.

* * *

Wan Chiu  4/16/97
Method

Preproduction will be focus on the creation of an animatic, which will be the blue print of the entire project. After the animatic is approved, actual production will follow.

The film will be modeled, animated and rendered with Alias/Wavefront Studio.
Stage one : Modeling. The creation of characters, props and environment.
Stage two : Creating scenes. Objects are placed in front of the camera. The length of the scenes and camera movement are established.
Stage Three: Rough animation. The characters will be animated rapidly to determine if the shots are working.
Stage Four : Detail animation. Fine tuning the movements and finishing up the shots.
Stage Five : Lighting individual scenes.

Approved footage will be rendered, then transferred onto optical video disk and later into video tape. The model wireframe and rendered images will be backed up onto removable medium regularly. Progress and difficulties are recorded daily for further discussion with committee.

Using Fractal Design Painter, object texture will be painted by hand on a pressure sensitive drawing tablet, Auxiliary footage, such as the commercials shown on the floating screen, will be done in pencil and paper, scanned and later rendered into animation using Director, Adobe Photoshop and After Effects.

Aaron Feldman, a graduate student from the Eastman School of Music, will compose a music soundtrack for the film.

Sound effect will be mixed in computer with Deck II and SoundEdit 16. Editing and final sound mixing will be done on the film/video SVHS editing stations.

The final film will be on an SVHS videotape.
## BUDGET

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**Timeline**

I have opted to complete my thesis in 2 quarters worth six credits each.

**PREPRODUCTION**

**Spring’97**  2 credits

- storyboarding
- character design
- concept sketches

**PRODUCTION**

**Fall ’97**  6 credits

September
- weekly meeting with thesis committee
- character construction

October
- weekly meeting with thesis committee
- character construction
- background construction
- character animation

November
- weekly meeting with thesis committee
- character animation
- test rendering
- review and revise

**Winter’97**  6 credits

December
- weekly meeting with thesis committee
- wrap up animation
- start rendering approved animation sequences
- review and revise

January
- weekly meeting with thesis committee
- finish rendering approved animation sequences
- start post-production: editing and soundtrack dubbing
- review and revise

February
- weekly meeting with thesis committee
- complete post-production
- animation defense and screening
- complete the thesis report
Marketing

As my thesis project will be animated with an educational licensed software, making any profit from the film will be illegal. However, I will enter the film into various major international animation festivals including:

• Animation Celebration, Los Angeles, California
• Hiroshima Film Festival, Hiroshima, Japan
• Asifa East Film Festival, New York, New York
• Ottawa International Animation Festival, Ottawa, Canada
• FANTONCHE Internation animation Film Festival, Baden, Switzerland
• SIGGRAPH 98, Orlando, Florida
• Movies on a Shoestring, Rochester, New York

The finished thesis will also become a major part of my demo reel, which will be sent to major animation studios including:

• Walt Disney Productions, Anaheim, California
• Warner Brothers, Los Angeles, California
• Fox Animation, Phoenix, Arizona
• Sony Imageworks, Hollywood, California
• Dreamworks SKG, Los Angeles, California
• Blue Sky Production, New York, New York
• Industrial Light and Magic, San Rafael, California
• Pacific Data Imaging, Sunnyvale, California
• Digital Domain, Venice, California
• Rhythm and Hues, Los Angeles, California
APPENDIX B
Original Storyboard
APPENDIX C
Final Storyboard
APPENDIX D
Production Stills