Thokolosi

Karabo Legwaila

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A Short Film by Karabo Legwaila

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Thesis Committee

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ABSTRACT

The legend or myth of the malevolent spirit known as Thokolosi has long been known among my people. Some people have even been known to take measures to protect themselves from attacks by Thokolosi by raising their beds on bricks to prevent the spirit attacking them at night. I have always felt that this legend was ripe with possibilities for the animation medium and having loved the idea of Thokolosi, I felt it was a good time to attempt to make a film about it. This was also a way for me to introduce a small piece of my culture to an American audience.

The paper explains how I found new ways to do things in order to achieve the look I wanted for the film. For example, the paper examines how I managed to create eyes in such a way that they were as emotive as possible. The film began with much more realistic character designs than the ones used in the film. The paper explores the reasoning behind my decision to change to a cartoon-like style and remodel the characters. The paper outlines the other challenges faced and the solutions used to overcome them.
Thesis Paper

Introduction

Superstition, myths and legends have always been a part of African culture as with any culture. Films have been made based on different legends from different countries for decades but as far as I have seen, there have never been any made on those from my home country of Botswana. I find the Thokolosi myth to be very interesting and full of potential for the animation medium.

For me, this was an opportunity to create a film that meant something to me personally and represented my culture in some way. I didn’t want the film to simply be an exercise in animation principles but a meaningful, cultural piece of storytelling.

So why did I chose this particular myth to explore? My whole life I have found the story of Thokolosi to be highly intriguing. Growing up, there were always people who believed that the myth was true. They even went as far as to elevate their beds on bricks in an effort to protect themselves from Thokolosi. As a child, there were times when I was afraid to look under my bed out of fear because of the stories I had heard. As I got older, I came to love the myth. Making a story about Thokolosi was a natural decision for me.

My hope for the film is that it will introduce the audience to a new story that they most likely haven’t heard of and also introduce them to the culture of Botswana. I hope that it will ignite the audience’s interest in Tswana* culture and alert them to the virtually untapped resource that is Tswana mythology. Another hope I have for this film is that it will show other Tswanas that they too can get into this field and make films that represent Botswana in some way.

* Tswana refers to people from Botswana.
**What is Thokolosi?**

The name Thokolosi refers to a mythical zombie-like creature from the Southern part of Africa. Thokolosi is generally believed to be a very small, dwarf-like creature that stands about three feet tall and is covered in thick, brown hair. It is said to have large eyes and sharp teeth. There are some that believe that Thokolosi has only one buttock and a penis that is so long that it has to be slung over the shoulder of the creature. As such, Thokolosi is believed to have great sexual prowess, which is sometimes taken advantage of by the master of the Thokolosi. In some countries, Thokolosi has been blamed for the spread of HIV through the sexual abuse of women during the night and as such people have been known to prop their beds up on bricks to prevent Thokolosi from reaching them in their sleep.

The myth of Thokolosi is one that has been a part of my culture for a very long time. To this day there are still some people who believe in and fear this creature. There are many spellings of the name Thokolosi depending on the region you are in. In Botswana, where I’m from, we spell it Thokolosi, which is why I went with that spelling. Examples of the other spellings are, Tikoloshe, Tokoloshe and Tikaloshe. The name originates from the South African language of Xhosa. There have been similar creatures in European folklore called “Brownies.”

**Summoning Thokolosi**
Thokolosi is generally summoned by someone to do his or her bidding. There are many reasons that someone might want to summon such a creature. Usually, it is summoned for the purpose of scaring someone into doing something but they have also been used to harm or kill others.

The summoning of this creature is not something that is taken lightly and has a very steep price. The summoning of Thokolosi can cost the summoner the life of a relative, the logic being that if you are willing to create an unnatural life, you must be willing to sacrifice a natural one. As such, anyone who does this is usually quite desperate.

The process of summoning or creating Thokolosi changes from region to region but one of the methods includes killing someone and removing their eyes and tongue and then taking a heated metal rod and thrusting it into the skull of the corpse, causing it to shrink. From there, the summoner takes a magic powder and puts it into the mouth of the corpse thus re-animating it and creating Thokolosi. Thokolosi is then under the control of the summoner and must do their bidding.

Thokolosi is also said to have the power of invisibility, which it gets by putting a magic pebble in its mouth. This causes it to talk with a lisp. Once invisible, Thokolosi can only be seen by young children. Thokolosi is very fond of children and has been known to befriend children and visit them at night when the parents are asleep. This might account for children claiming to have “invisible friends” who they play with. So powerful is Thokolosi’s love for children that they sometimes disobey their masters to protect children and they have been known to remain friends with the child well into adulthood. Thokolosis have also been passed down to children or grandchildren for
protection and friendship although some people forbid this friendship in the fear that their children may become witchdoctors.

Once summoned, Thokolosi can only be vanquished by witchdoctors known as Sangomas. Sangomas have special medicines called “muti,” that are made from the remains of a dead Thokolosi and can be used to paralyze the creatures and make them visible. Once visible, they can be easily killed. Muti can be poured across the threshold of a door or window by a Sangoma to prevent Thokolosi from getting into the house.

**Character Design**

My initial character designs for this film leaned more to the realistic side since I consider myself a modeler and thought it would be a good way to show my modeling skills. As I am not much of a 2D designer, I always prefer to “doodle” in 3D in Maya or 3D Studio Max and design the character as I go, refining the different parts of the model as I see fit until I have a completed character.

I was generally very happy with the way the models were turning out. When I began the rigging process, I realized that the rigs for realistic characters like these would have to be quite complex and I started to feel like it would take too long per model to rig them adequately, especially given that some of them would need to be able to talk. People see real faces everyday and for me to be able to produce a rig that could mimic realism properly would have taken far too long and required rigging skills that I wasn’t really sure I had. Also, given that the realistic models generally have a lot of geometry in the faces, setting up blendshapes for facial animation would be very time-intensive, especially considering that I had eight characters to complete. Generally speaking,
realism in characters translates into much more work in the production process, from modeling all the way to animation.

When I began the project, I knew there would be a lot of work to do but I was sure that it would be work that I could manage in the timeframe I had. As I actually got into the production process, I realized that I had too many characters and putting a lot of detailed work into each of them would cost me a lot of time.

It was becoming very clear to me that realism like this would hurt my film more than help it and so I made the difficult decision to scrap all the models and begin the characters again in a more cartoony (unrealistic, cartoon based, over the top) style. I never, at any time felt that the work I had done on the realistic models was wasted because I saw them as good demo reel models and models that I could potentially use in other projects.

Another decision was to change the Grandmother character to a Grandfather and make the Granddaughter a Grandson. The main reason for this was simply the fact that I would have to do all the character voices and I couldn’t really do female characters very well. I couldn’t find anyone else that could do a good African accent so it was up to me to do all the voices. The other female character (Grandfather’s Mother) in the film remained a woman because it was necessary for the story and she didn’t have any dialogue so I didn’t have to worry about a voice for her. I would rather have kept the characters the gender they originally were but necessity dictated that I adjust them. I do feel, however that the impact on the story of these changes was minimal; I feel the story is just as strong either way.
Note: Please see Appendix D for comparisons between the original, realistic, character designs and the cartoony ones that were eventually used.

I decided from the beginning to design my own version of the creature for a couple of reasons. Firstly, I was not well enough versed in the use of Maya Fur and I really didn’t believe that I had the time to invest in learning it to the point where I could put it into production. Also, after doing some fur tests, I found that the render times for fur rendering were prohibitive.

Secondly, I wanted to have my own take on the monster and make the design my own. I wanted to push my own design skills and modeling skills and come up with something great without being constrained by vague descriptions made by people with no real credibility.

The original Thokolosi model was a lot more muscular and realistic looking. He had a big head and big scary eyes as well as an upturned nose that looked a little like the snout of a pig. He had an athletic physique that started off looking too tall and skinny so I shortened his legs while leaving his arms long to throw off the proportions and make him more interesting. His hands were designed to be very bony with sharp fingernails and large, curved talons coming out of each thumb. These talons were going to be used as his weapons instead of the knife that I eventually gave the character.
When I created the cartoony version of him, I went in a different direction in terms of the design. Thokolosis are sometimes called water sprites because they tend to like being where there is a large body of water and they are known to be good swimmers. I thought that it would be fitting to give the Thokolosi character a webbed fin on his head and also add some webbing to his tail and toes to make him look like he belonged in the water. I never planned to have him swim in the film but I liked the way the fins looked on him so I kept them. I rigged the fins on his head to be able to move with the intention of using them to show his emotional state. For example, when a cat gets angry, it raises the hair on it’s back and hisses, the fin on this head was rigged to be able to stand up or lay down depending on his current mood.

I kept the teeth from the original Thokolosi model and used them on the cartoony version because they were gruesome and scary and I wanted him to be scary even though he was cartoony. I also gave him large goat-like ears that could move depending on his mood, much in the same way a cat might fold its ears back when it’s angry.

The cartoony version did not have the sharp fingernails that the original model had because I decided to give him a knife to use instead. I liked the idea of the knife because it was a nice twist if he used the same knife for his evil deeds that was used to create him. The same knife that created him is the same knife he would use to kill others.

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**Grandfather**

Originally, the Grandfather was female and I had modeled an old lady in a long skirt, a turtleneck sweater and a head wrap. I
thought she had a lot of character and I would have really liked to use this model but it would have involved having to simulate cloth for her skirt, which might have been tricky when she had to sit down. Then there was also the matter of me not being able to adequately produce an aged female voice to use for her. Given that she is one of the main characters in the film with the most dialogue, I decided to redesign her as an old man.

The Grandfather character was one of my favorite designs. I chose to make his waistline very high to mimic the way that some old men wear their belts very high up on their stomachs. I took the spectacles from the original Grandmother character and put them on him to give him the look of wisdom. I also gave him the hat I designed for the original Thabo character.

The eyes on the Grandfather were angled in such a way as to give him the look of kindness. Also, big buckteeth created continuity between the model of him as a child and the one as a grandfather. Another feature I gave him was big ears as I tend to think of old men as having big ears.

Young Grandfather and Grandson

The Young Grandfather character is basically the same as the Grandson character except for a few features. The reason I used the same model for these two characters was because they are related so it makes sense that they would look alike. It also provided a way for me to avoid starting another character from scratch. I was even able to use the same blendshapes for both of
them. The main difference between them was that the Young Grandfather had buckteeth and was shorter.

The Sangoma character was a lot of fun for me to create. I wanted him to be strange looking and funny to look at. I wanted him to be very skinny and bony but with big feet to offset the skinniness. Witchdoctors tend to be thin and odd looking in real life and I wanted to make sure my version had that in the design. The original design for Sangoma was an extremely emaciated version of myself. I actually modeled his geometry around a 3D skeleton to give it the feeling of skin clinging to bone.

The headgear on witchdoctors varies from place to place so I decided to invent my own for this character. I had modeled the horns for the original Sangoma character so it was just a matter of simply readjusting them for the new model. I wanted them to be big on his head in order to make his head seem even bigger than it is.

When it came to clothing, I wanted something unusual and silly so I decided to put him in his underwear and socks. I thought since he is a witchdoctor and performs all kinds of unknown spells and does things, we don’t really know why he’s always in his underwear and have to assume that it’s a requirement for what he does. Nobody would dare ask him why he’s dressed like that due to fear of being bewitched!

I gave him bad teeth with some gold caps on some of them just to add to his unattractiveness. His eyes are cloudy because it gives him a mystical quality. He also has
a magical staff that he carries. When I think of a witchdoctor, I always think of him or her holding some kind of magical stick or other kind of object that they can channel their power through.

Mompati

Mompati was designed to be somewhat handsome and attractive. I gave him wider shoulders and a narrower waist to make him look more athletic. The first Mompati design was more muscular and dressed in all leather and cowboy boots. He was originally supposed to ride a motorcycle further adding to his appeal as a man. I had even given him a goatee at some point but later scrapped that idea due to complications. The cartoony version maintained that handsome look with a strong jaw line and pronounced cheekbones. I kept his head bald to make him sexier.

The athletic nature of Mompati is also meant to convey a competitive side to the character, which provides further explanation for the things that he does in the film. He hates to lose and is willing to go to great lengths to win, even if people get hurt. This also makes you wonder if Mompati really loves the woman as much as it seems or if it’s more of an issue of pride. Is he simply not willing to lose the woman to a less attractive man?

The reason Mompati was made attractive was to provide some extra motivation for what he does in the film. He is supposed to be better looking than the Thabo character, which adds to his dismay when the woman chooses Thabo over him. In love it takes more than looks to win a woman’s love.
In the 2D sequence in the film, as Mompati and Thabo are competing for the woman’s love, Mompati’s gifts to the woman are very extravagant and not very thoughtful. This gives a glimpse into the personality of the character. Maybe the reason he didn’t win her over was because he did all the wrong things.

Thabo

Thabo is supposed to not be very good-looking yet not ugly. I wanted to make him look kind and loving. I gave him some male pattern balding to further push the idea that he was not as physically attractive as Mompati.

The first Thabo model was actually short and fat and quite ugly with a missing finger on one of his hands. In the cartoony version I decided to give him long bandy legs and a short torso with narrow shoulders. He wears a sweater and dress shoes to make him look smarter and more educated. These are the kind of clothes I expect a college professor to wear.

In the 2D sequence, Thabo is shown doing very thoughtful things to win over the woman like singing to her and giving her flowers. He is supposed to be a very nice guy who knows how to treat a lady and this is how he wins her over.
The Woman character was supposed to be attractive to make it understandable why Mompati would go to the lengths that he did to try to get her back. The original model design of her was full figured with wide hips and a large backside. I didn’t want to make her unrealistically attractive by making her look like a skinny supermodel because in Africa, that is not generally considered to be attractive. She needed to be stylish so I gave her a nice sweater with tight jeans and high heeled boots as well as a hat. I really liked the way her body had turned out and was disappointed at having to start the character over from scratch even though I knew it was for the best.

I gave the cartoony version of her a big Afro hairstyle simply because I didn’t want to try to simulate hair and I always liked Afro hairstyles. I made it very large because I felt like her head wasn’t big enough in comparison to the other characters, so the Afro compensated for that. I put high heels on her and gave her small feet to make her more feminine and attractive.

For all these characters, I wanted to have very large eyes because I believe that eyes show a lot of emotion and they are very important in making the character feel alive. For the modeling of the eyeballs, I wanted to go further than simply texturing a polygon sphere with an eye texture and calling it complete because this tends to make the eyes look fake and dead. I modeled the eyeballs in two parts, the outer glossy layer and the inner layer. The outer glossy layer is basically a sphere with a bulge on the front of it that
approximates the cornea of a real eyeball. This is textured with a transparent, shiny, reflective material.

The inner layer of the eyeball is a sphere with the pupil and surrounding area actually modeled to give the eye some dimension. You can see the structure of the layers of the eyeball in the image below. Notice that the pupil and its surrounding area actually dip into the eyeball to give dimension to the area. This makes a world of difference in the character, especially when in a closeup. This technique of modeling eyeballs is used by Pixar when they model their characters’ eyes and I find it makes the eyes much more expressive.

Figure 1: Eyeball Structure. Modeling the eyeballs this way makes for more expressive eyes.

As far as texturing went, I knew that I didn’t want to have realistic texturing for the characters. I knew that I didn’t want to have highly detailed texture maps with details like pores and wrinkles. With the original models, I didn’t get to plan the texturing because I decided to ditch them before that stage. With the redesigned models, the cartoony quality of them dictated that I not go overboard with the textures. I decided to go with soft coloring that looked like it was airbrushed on the models. I added subtle
color to the cheeks and lips of the models and I painted on the eyebrows in a stylized fashion. The other reason I didn’t want to put too much detail in the textures is because I knew that a lot of that detail would be lost when I removed the color from the renders.

For the character’s clothes, I used bump maps to give some texture to the fabric of their clothes. I decided against cloth simulation for the clothes due to the amount of extra work it would require. On the sweater of the young Grandfather, I used an image of the original Thokolosi character as the design on the front of the sweater as an Easter egg.

**Aesthetics**

As far as influences for the look of the film, Pixar Animation is definitely a large influence for me since they do 3D animation better than anyone. I also draw influences from other 3D animated films from other studios like Dreamworks and Blue Sky. Even with these influences, I didn’t want to try to simply recreate the style of those films. It was important to me that I add my own style and feel.

For the look of this film, I didn’t want overly realistic lighting. I wanted the lighting to create a certain mood for the scenes and I didn’t feel that it had to be realistically accurate. The three point lighting setup taught in most Computer Animation is generally frowned upon in both the photography and film industries because it is very unrealistic and somewhat cliché. In spite of this, I wanted this effect for my scenes, especially the ones in the Sangoma’s hut, because I was not aiming for realism and I liked the way the strong backlight looked.
I wanted the scenes with the Grandfather telling the Grandson the story to be in color while the flashback scenes were in a different visual style. I originally wanted to show the flashback scenes in black and white because they were scenes from the past and black and white implied old footage. However, I didn’t like the complete loss of color caused by the black and white effect because I felt that too much of the detail was being lost. I needed an interesting way to represent the footage and differentiate it from the present day scenes with the Grandfather and Grandson. During my many experiments, I accidentally stumbled on a sepia-like tone that I eventually decided to use for the style of the scenes from the past. I simply laid the sepia tone over the black and white footage and liked the way it looked because even though the color was gone, adding the sepia made it look like there was still a little color in there. I also liked the earthy browns that it produced. I felt the sepia tone was just as effective as the black and white in representing the past. The image below shows how I converted the original render to the final style.

![Image of original render, color removal, and sepia tone added]

**Figure 2: The Look of the Film.** The render was originally rendered out in color and I desaturated it to get the black and white look. I wasn't quite satisfied with the black and white so I added the sepia tone to make it more interesting.

When I first tackled lighting the flashback scenes, I thought it would make sense to simply light the shots with white lights since I was planning on converting all the renders to black and white. When I rendered my first shot lit with just white lights and
then converted it to black and white, it seemed that the lighting became too flat. I realized that it would be better to use colored lights and light the shots as I normally would and then from there convert renders to black and white. This gave better depth to the lighting and made for much better renders, even when I converted them to sepia. This gave me the flexibility to be able to have the scenes in full color if for any reason I decided I didn’t like the sepia look anymore.

**The Living Room**

The living room set was designed with the Grandfather in mind. I didn’t want to clutter the room with a lot of things so I kept it simple. I decided that the Grandfather’s armchair should have a high back and large armrests and basically engulf the Grandfather when he was sitting.

**Sangoma’s Hut**

The hut of the Sangoma is meant to be somewhat eerie and uncomfortable to be in. I needed to feel like a place that you wouldn’t want to enter or go near. Witchdoctors tend to have a certain stigma about them and most people do their best to stay away from them to avoid being bewitched or cursed. I wanted the exterior of the hut to convey this feeling. The soil outside the hut was bare and devoid of plant life to give the feeling that even plants wouldn’t go near such a place.

I designed the outside of the hut to be very untidy and badly kept. The roof of the hut consists of sections of corrugated iron that are thrown about haphazardly and weighted down with random cinder blocks, tires and planks. This shows that witchdoctors are quite poor, which in reality is an accurate assumption. The witchdoctor business is not very lucrative financially; people who become witchdoctors often do it
because they feel that it’s their calling and a lot of the time they get paid through food items or livestock. I tried to convey the feeling of poverty in the design of the hut set. I put a donkey cart outside the hut to show that the witchdoctor didn’t own a car and had to get around by a donkey drawn cart

For the interior of the hut, I made it very bare and impoverished with a mattress directly on the floor with a single blanket with cheaply made curtains tacked on the wall with wooden spikes. The door was constructed of a few planks nailed together and the window was constructed in the same fashion.

The Grandson’s Bedroom

The Grandson’s bedroom was not meant to be a very complicated set. All I really needed was a bed for the Grandson to sleep in. I decided to put a render of the original Sangoma model as the design on the bed covers as an easter egg.

The Grandfather’s Bedroom

The Grandfather’s bedroom was also not a very complicated set. All I really needed was a chair, a bed and a window.

The Tool Shed

This set was the one I had the most fun modeling even though it was only used briefly. The shed was basically completely made of wooden planks, including the floor. The shed was lit by paraffin lanterns so the light would flicker and the shadows would dance. Since this was the summoning place of Thokolos, it had to have an eerie feel to it. I put different gardening tools and things around the place to make it cluttered and claustrophobic.
Challenges

There were a number of challenges that I faced during the making of this film. Here is a brief explanation of some of them.

Cloth

As a challenge I decided to have animated cloth in the film. I had dealt briefly with cloth simulation in Maya and I always found it to be very difficult to use as well as slow to simulate. Simulations frequently crashed, requiring me to quit Maya and restart it, even on simple simulations. This was quite discouraging but I was determined to make it work because I really wanted to have cloth simulation in this film. Luckily, when Maya version 8.5 was released, it contained a completely rewritten cloth simulator that worked much better and hardly crashed at all. That, combined with the other new features, provided a very powerful cloth workflow.

My workflow with cloth was pretty straightforward. I would have two versions of the cloth geometry, a low-resolution mesh on which the actual simulation would be calculated and a textured, high-resolution mesh that would actually be rendered in the shot. The way I would connect these two meshes was with a wrap deformer so that the high-resolution mesh would follow the low-resolution mesh’s motion without having to spend large amounts of time simulating a high polygon mesh. Once the wrap deformer was set up, I could hide the high-resolution mesh and tweak the simulation on the low-resolution mesh. When I was satisfied with the simulation, I would then unhide the high-resolution mesh and create a new geometry cache to store the deformation information. A geometry cache is basically a file where the vertex coordinates of a deforming object are stored for each frame of the animation. The advantage of the cache is that since the
Thokolosi’s Invisibility

For Thokolosi’s invisibility, I realized in the storyboard stage that I would need to have two ways of representing it, invisibility to adults and visibility to children while still being invisible to everybody else. The first one was easy because I simply...
didn’t render Thokolosi and used the camera work to let you know that he was there even though you couldn’t see him.

At some point, the Young Grandfather had to see Thokolosi attacking his father even though Thokolosi was still invisible to everyone else. I wasn’t sure how I wanted to represent this. I knew I didn’t just want to have Thokolosi be partially transparent because that was boring and simple so I went about finding a way to show this that looked good. After a lot of failed tests, it dawned on me that I could simply render an occlusion pass (occlusion will be discussed in the Compositing section) and use that as the “invisible to adults yet visible to children state.” I found that this worked very well and produced a nice effect.

**Compositing**

Compositing shots can sometimes prove to be a little tricky depending on the shot. Where possible, I tried to separate the elements of the shot into render layers so that I didn’t have to render everything in the shot in one pass. For example, if the camera was not moving and there was no motion in the background, I could simply render a single frame of the background and then render the foreground elements separately. This saved render time and gave me better control of the different parts of the shot so I could adjust them later in post. This allowed me to fake depth of field by simply blurring the background layer, thus keeping the character in the foreground in focus and creating a nice camera effect as shown below.

This technique can be used with as many layers as you like, not just two. If there were another character in front of the Grandchild, I would have rendered him on a separate layer as well and blurred it so that the Grandchild still had the focus. A rack

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focus could easily be created by animating the blur value of the layers to simulate moving the focus from one layer to another. In animation, a lot of what you see on screen is the result of illusions created by the animator to simulate the kinds of effects that live action filmmakers can easily achieve by adjusting the settings on their cameras. Faking depth of field is no different and if done well can really make a shot look aesthetically pleasing.

Figure 3: Basic compositing. You have a background plate and a character plate. The two plates are combined and the background is blurred to create depth of field.

Generally this was pretty straightforward if the foreground and the background were not connected and could easily be separated. In some instances, as in the shot where the witchdoctor raises his hand in front of the camera to stop Mompati talking, I needed to be able to have part of an object blurry and part of it in focus. The witchdoctor’s hand
was the foreground and the rest of his body was the background. The problem here is that I couldn’t simply separate the shot into layers because the witchdoctor’s hand was connected to the rest of his body and I wanted the blur to happen gradually and become more pronounced the further from the camera it went while keeping the hand in perfect focus.

One solution I tried was in-camera depth of field. In Maya you can do in-camera depth of field renders where the shot is rendered with the blur already calculated on the image. The main problem with this is that you don’t have any control over the blur in post and if you don’t like the settings, you have to render the shot again, which may take hours or days depending on the shot. Also, in-camera depth of field is render intensive and will increase render times, which I wanted to avoid given that I didn’t have a render farm. The other problem with in-camera depth of field that I found was that the image had a lot of grain when rendered and it seemed that there was no way to avoid this. For these reasons, I elected not to use the in-camera depth of field and find another solution.

The solution I found was to render the images in an image format that had a built in Z-depth channel, namely the RLA format. Z-depth is a visual representation of the distance from the closest point to camera to the farthest point from the camera. Since renders are two-dimensional images, they have no real depth on the Z-axis. The Z-depth channel simulates the depth so you can apply Z-depth-based effects like depth of field on two-dimensional images. The Z-depth channel is a grayscale image that has values ranging from white to black where the whiter a pixel is, the closer it is to the camera and the blacker it is, the further away it is. The image below gives you an example of a depth map. After Effects, my compositing software could read the RLA image format and use
the Z-depth channel information to gradually blur the image according to the distance of objects from the camera. I could also animate the settings to create effects like rack focuses. This was how I simulated a 3D effect in a 2D image.

Figure 4: Depth of field using Z-depth. The original plate has no blur. The hand in the z-depth channel is whiter than the rest of the body so it will be in focus. The final shot shows the depth of field effect applied.

While this was a good way to do it, I found that the settings were very sensitive and sometimes I couldn’t get it to blur just right. Also, sometimes, there were jagged areas at the edge of the blur but I did my best to make them less noticeable. All in all, even with its flaws, this was the best way I found to have an object partly in focus and partly blurred.
Another compositing issue that I had was that I wanted to get some of the soft shadows that you get with Global Illumination without the long render times. Global illumination is a very realistic way to render images that simulates how real light works. Light in the real world bounces around and causes soft shadows that are not easy to imitate in 3D. Because global illumination simulates the bouncing of light around the scene, render times can be quite prohibitive depending on the number of objects in the scene. Knowing that I didn’t have the time to waste on long renders, I decided to find another way to simulate the soft shadows.

Ambient occlusion is a technique that can be used to create these soft, realistic shadows without the long render times of global illumination. When using ambient occlusion, you have to render your shot in two passes, the raw render and the ambient occlusion pass.

As you can see in the image below the raw render doesn’t look very good. There is too much light in areas that should be in shadow like the mouth of the Grandfather and the chair around where he is sitting. The ambient occlusion pass is basically a grayscale image of the scene that gets darker where there should be shadow and lighter where there isn’t. Once I had these two passes, I could then multiply the occlusion pass over the raw render using After Effects to produce the final shot shown below. Multiplying the occlusion pass over the raw render simply overlays the dark areas of occlusion pass on the raw render. Simply put the darker the area on the occlusion pass, the more effect it has when multiplied over the raw render.

If you compare the raw render with the final shot you can see that the image is much more pleasing and has more depth. The Grandfather’s mouth is not brightly lit
anymore and the chair around where he is sitting is a little darker as you would expect. You can also see that the brim of the hat causes some shadow to fall on his head. Also, there is also now a nice shadow going from the armpit of the Grandson that wasn’t there before. This is a great way of improving the lighting on a render by leaps and bounds without too much cost at render time.

Figure 5: Ambient Occlusion Rendering. The raw render is not very interesting but once the occlusion pass is applied, the image takes on a much more appealing look.
**Screening**

The film screened on May 20th to very positive reviews. People thought the film was edited well and that it looked very polished and rendered well. Someone raised concern with the pacing being a little fast given that this is a story from a different culture. This was only a minor criticism and people thought that the setup was done efficiently with the 2D sequence as it would have taken much longer to finish the film if I had done full animation for it.

As far as the character design, people felt that the eyes on my characters were very expressive both because of their size and the way they were animated. I was glad that they noticed that because I put a lot of time into making the eyes emote what the character was thinking.

I was also given positive comments about the sound effects and music on the film. There was a comment that the Music was too overpowering in some spots, which I totally agree with. I had a hard time dealing with the sound levels because it always sounded different depending on the speakers I was playing it on. In hindsight, I really would have benefited from a professional doing my sound mix for me.

After the screening, I was approached by a student who thought my shot design was very cinematic. He was a live action student and he said he thought it was refreshing to see such cinematic cinematography and camera work in an animated student film. He was particularly impressed with how I used the background and foreground and my use of rack focus to play with the depth of field.

The film also screened at the Honors show on May 25th at the Dryden Theatre. To my surprise, I found out at the screening that I had won the SOFA faculty award for
Thokolosi. The film was also accepted into the Long Island International Film Expo but unfortunately did not win any awards. I also received an invitation to submit my film to the Film Brothers Festival of Shorts in Wilmington, Delaware.

All in all, I think the film has done very well and I’m proud of what it has accomplished thus far. Hopefully it will continue to do well as time goes on.

**Conclusion**

This film is definitely the biggest film I have worked on by myself and I feel that it’s my best work to date. I faced a lot of challenges in the creation of this work but I feel that I have grown as a filmmaker and as an animator.

I wish I had been part of a larger team for this project because I feel that the story could have been much bigger than it is and this would have required a group of people to properly do it justice. I had to cut down areas so that I could manage it by myself within a realistic timeframe. I also feel that in a team, I could have concentrated more on what I love to do, which is modeling and let someone else tackle things like animation and texturing, that are not my strong suit. With this said, I am very proud of this film and feel that my skills in this field have increased due to what I learned making it.

It takes a lot to spend hours on end in front of a computer screen even when you don’t feel like doing any work. During production of this film, I had a full time job as a Technical Animator and as soon as I got off work, I would have to force myself to sit down in front of my computer and continue my work on this film. This was very difficult considering I had already spent eight hours in front of a computer at work. I even had to spend whole weekends working on the film. Somehow I managed to get through it and
get the work done. Luckily, my wife was on an internship in another state for six months so I didn’t have to feel bad about neglecting her all the time.

I have given this piece everything I could give it and I hope that comes through when people see it. Despite all the rough patches, I thoroughly enjoyed making “Thokolosi” and I am already thinking about my next project.

This is a film about Botswana, my home country. These are the kind of stories that I grew up with and now I present this one to you.
APPENDIX A

Proposal
Title: “Thokolosi”  
Start Date: Fall 2005  
End Date: Spring 2008  
Budget: $594.28  
Running Time: 5 – 6 Minutes  
Release Format: DVD

Story: Sometimes the love of a child can deter great evil.

Synopsis: We begin on the outside of a house and the camera moves towards the house slowly. There is a window with light coming through it and the camera heads towards that window and goes through it. When the camera gets inside the room, we see an old man sitting in a large armchair with a small child sitting on the coffee table in front of him.

The child is looking across the room at the window, his eyes squinting as he looks. We cut back to a shot of the boy as he turns away from the window and looks at the old man.

The child says, “Tell me about Thokolosi.” The old man’s eyebrows raise and he leans back a little in his chair. He leans forward again and asks the child, “Are you sure you want to hear that story?” The child nods his head.

The grandfather begins to tell the story. “Well, I once heard of a man who came across the evil spirit known as Thokolosi but I’m getting ahead of myself here, let’s go back to the beginning.” As he is talking, the scene begins to fade into blackness.

The grandfather’s voice continues to tell the story as a voiceover. “This man’s name was Thabo and he and his best friend Mompati were both in love with the same woman. When it came time for her to choose, she chose Thabo and Mompati was furious and decided to do something about it.”

Through the telling of this part of the story, we see the three characters standing together. The woman moves over to Thabo and Mompati is pissed off.

The scene dissolves into a shot of the same man walking up to a small mud hut. He knocks and a croaky voice yells, “Tsena.” The subtitle says, “Come in.” He walks through the door and we cut to the inside of the hut. It is dimly lit inside the hut. The only light source is a light on the ceiling. In the corner, a shadowy figure is standing. It is the
Sangoma (witch-doctor). Sangoma says, “Dumela Mompati, s’tilo ke seo.” The subtitle says, “Hello Mompati, have a seat.” Mompati sits down in front the Sangoma.

Mompati begins to speak but the witchdoctor motions with his hand and Mompati stops. The witchdoctor tosses a handful of bones on the floor in front of him and then looks at them for a while. “I cannot make her love you, Mompati that is beyond my powers but there are other ways to deal with this situation. O a itse se ke buang ka sona.” The subtitle reads, “you know of what I speak.” Mompati’s facial expression changes to one of fear

We dissolve back to the grandfather and his grandson. The grandson interrupts the story and asks, “What was the witchdoctor talking about?” The grandfather replies by saying, “You see, summoning Thokolosi is not a simple task, you have to first kill someone and put magic powder in the mouth of their corpse to bring them back to life in the form of Thokolosi. This will cost you the life of a close relative. Also, if you give Thokolosi a magic pebble, it can become invisible and only small children can see it.”

The grandson’s mouth opens wide at his grandfather’s last statement. He quickly closes his mouth looks at his grandfather. The scene dissolves and we see Thokolosi rising up in front of Mompati who looks scarred. He then gives it a pebble and steps back. Thokolosi turns towards the door and as it’s walking towards it, it puts the pebble in its mouth and slowly becomes invisible. The door opens and the scene fades.

We then cut to a shot inside a living room with a man in a recliner and a small child sitting on the couch next to the recliner. They are watching television and the room is dimly lit with most of the light coming from the flickering TV. It is dark outside and there is an open window behind the couch with the little boy.

At this point, Thokolosi climbs in through the window. It’s invisible but through the camera movements, we get the idea that there is something there. Suddenly the recliner with the man on it is knocked over as if something jumped on it from the front. Thabo is knocked over backwards off the chair. The child is startled by the sudden commotion and looks around to see what it is. We switch to a POV from his perspective and we see his father on his back with Thokolosi standing on his chest with one arm raised and holding a long knife.

The child dives onto his father to block the knife. Thokolosi stops and steps back.
The child and Thokolosi stare at each other and Thokolosi drops the knife as the scene fades into blackness.

We cut back to the grandfather and grandson and the grandson asks, “So what happened to Mompati?” The grandfather smiles at the child and says, “Well, he was eventually overcome by madness when his plan didn’t work like it was supposed to. After his mother died unexpectedly he hung himself and was found days later by the neighbors.”

“And Thokolosi?” The child asks.

“Well it was said that the little boy became good friends with Thokolosi and it protected him all his life,” replies the grandfather.

Cut to the grandfather tucking the boy in bed. He walks out of the room closing the door behind her but leaving a small crack. We cut to him entering a different room with a plate of food. He puts the food on the floor and steps back. After a few seconds, he frowns as if confused and looks at the plate of food that is still untouched on the floor. There is the sound of giggling and he turns with a frown on his face.

We cut to him walking up to the little boy’s room and looking through the crack in the door. The giggling continues and we cut to his POV and we see the child sitting up on his bed laughing and Thokolosi jumping up and down on the bed. As the jumping continues, a pebble falls off the bed and on to the floor.

The grandfather turns away from the door and big smile comes across his face. As he walks away, the scene fades like smoke to black.
Timeline

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- Story & Script
- Research and Development
- Modeling
- Texturing
- Rigging
- Sound
- Animation
- Rendering
- Post

Budget

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APPENDIX B

Storyboard
Thokolosi - 37

1a
Dialogue:
Fade in to shot of the


Sound: Sound of crickets and
slight wind

1b
Dialogue:
Pan down to a house
with an open window.


Sound: Same as above.

1c
Dialogue:
Zoom into the open
window


Sound: Same as above.

1d
Dialogue:


Sound:
2

Dialogue:
Child looks at the window
camera moves in to the
window

Sound:

3

Dialogue:
Reveal shot of the child
looking at something
camera moves into her
eyes. She squints.

Sound:

4

Dialogue:
POV shot from child's
perspective of window:
camera moves left and
right as if looking for
something.

Sound:

5

Dialogue:
Child: "Granny told me
about Thokolosi."

Sound:
Dialogue:
GRANNY: "Are you sure you want to hear that story?"

Sound: Child nods.

Dialogue:
GRANNY: "Well, I once heard of a man who had a run-in with the evil spirit known as Thokolosi; but I'm getting ahead of myself here. Let's go back to the beginning.

Sound: "Freak like Smoke."

Dialogue: Voice over

Sound:
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<th>Dialogue</th>
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<td>9b</td>
<td>Voice over continues.</td>
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<td></td>
<td>Sound: Zoom into the lone figure's face. As we fade the circular head turns into Mupathi's head.</td>
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<tr>
<td>10</td>
<td>Zoom out of this face. Sad look on his face. He looks down at something in his lap.</td>
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<td>Sound: Tilt camera down.</td>
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<tr>
<td>11</td>
<td>He is holding a picture of a woman.</td>
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<td></td>
<td>Sound:</td>
</tr>
<tr>
<td>12</td>
<td>A tear rolls down Mupathi's face, and an anxious frown crosses across his face.</td>
</tr>
<tr>
<td></td>
<td>Sound: Extreme CU shot. Crossfade to next shot.</td>
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13
Dialogue: Mopasi walks towards the hut.
Sound:

14
Dialogue: Mopasi knocks loudly at the door.
Sound: Knocking sound. "TSENA!"

15a
Dialogue: Côt is inside of hut as Mopasi opens the door.
Camera slow pans from left to right.
Sound: Crackles of a fire.

15b
Dialogue: "Dumela Mopasi, s'tilo ke seca."
Cloaked figure on the other side of the room.
Sound: Crackling fire.
Dialogue:
Mampati sits down on a wooden stool across the fire from the witch-doctor.

Sound:

Dialogue:
Mampati begins to speak.

Sound:

Dialogue:
Witch doctor quickly motions to Mampati to stop talking.

Sound: Silence

Dialogue:
Mampati stops talking immediately and looks surprised.

Sound: Silence
20 Dialogue:

Sound: Bones rattling on the floor

21 Dialogue:

Witchdoctor leans forward and reads the lines.

Sound: Crackling fire.

22 Dialogue:

No! I can't make her love you. Mampati.

That is beyond my powers. But there is

other way to deal with this situation.

On the "be the living the stone."

Sound:

23 Dialogue:

Mampati's facial expression changes.

Sound:

Fade out like smoke.
Dialogue: Child: "Granum, what was the witchdoctor talking about?"

Sound: Fade out like smoke.

Dialogue: Granum: "You see, summoning Thokolosi is not a simple task; you have to first kill someone..."

Sound: Sound of a knife stabbing someone. Somebody screams in agony.

Dialogue: Granum: "Then you have to blow magic powder in the mouth of the corpse..."

Sound:

Dialogue: Granum: "The powder transforms the body and brings it back to life as Thokolosi. But don't be fooled by its size; it very dangerous."

Sound: Something under the blanket starts to move. Thokolosi stands up and throws off the blanket.
27b

Dialogue:
Thokolosi该项 as it throws off the blanket.

Sound:
Camera pans in a circular path around him slowly.

28

Dialogue:
Granny: "And if you give Thokolosi a magic pebble it can use it to become invisible to everyone but children."

Sound:
Zoom in to the pebble. Fade out like smoke.

29

Dialogue:
Granny: "Mophato knew the cost of summoning Thokolosi: But his love for Sedirang won......"

Sound:
Child looks surprised but then closes her mouth as Granny continues the story.

30a

Dialogue:
Granny: "...in so strong that he ended up summoning the spirit and sending it after Thokolosi."

Sound:
Thabo gives the magic pebble to Thokolosi.
Dialogue:
Low angle camera angle. Thok moves towards the camera and slowly starts to vanish.

Sound:

Dialogue:
Night-time. Exterior shot. POVs as camera moves quickly to the window. As the camera gets to the window, you can see two people inside.

Sound: Light padded footsteps
Crunching lower

Dialogue:
Child in foreground climbing. Thabo in background in a chair reading. Rack focus from foreground to background.

Window starts to open.

Sound: Television sounds. News is on.

Dialogue:
Close shot of Thabo reading. Rack focus from his face to the window as it opens. Thabo doesn't know anything.

Sound: TV sounds
35

*Dialogue*
POV as Thokolosana runs towards Thabo at high speed.
Cut to next shot just as Thokolosana leaps up.

*Sound*
Soft sound of padded feet moving quickly.

36

*Dialogue*
Thabo flies towards the camera and lands with a thud! Camera shakes.

*Sound*
Thabo lands with a heavy thud and lets out a muffled groan.

37

*Dialogue*
The little girl is startled at the sound and turns around to see Thabo is flying across the room.
Camera panning slowly from left to right, focus on her face to Thabo.

*Sound*
"SUPER SLO-MO!"

38

*Dialogue*
Thabo rearends Thabo or he looks around for whatever last him.

*Sound*
TV continues.
Thokolosi - 48

**Dialogue:**
Thabo's wife is sitting at her computer working. Camera slowly pans to the right. Suddenly, Thabo's voice is heard. Wife is startled and turns around.

**Sound:**

---

**Dialogue:**
She sprints towards the door. Camera follows her stealthy style.

**Sound:** Running footsteps.

---

**Dialogue:**
She opens the door abruptly. Camera begins a fast move backwards from her...

**Sound:**

---

**Dialogue:**
Camera continues to move back and then fall into frame with a thud...

**Sound:**

---
39

POV from behind Thabo as Thokoloi dashes toward him. Just before it hits him again.

Sound:

41

The girl looks around anxiously. She doesn’t know what is attacking her. She jumps out of the way as the squatting man approaches her.

Sound: Thabo lets out a scream

40

POV of the girl. Thokoloi slowly approaches, a studded semi-automatic. Thokoloi jumps out of Thabo’s reach, knocking him back to the floor.

Sound: Thabo groans as Thokoloi lands on him

42

Low angle shot as Thokoloi raises his arms, bearing his claws about to strike.

Sound:
43
Dialog: Low angle from behind her feet as she runs towards her father at high speed.

Sound: Running footsteps.

44
Dialog: CU of hand going up about to strike.

Sound:

45
Dialog: CU on Thoko's face as girl runs up and dips under her father's arm, back towards the child.

Sound: Child screams.

46
Dialog: Thoko looks surprised and lowers its arms.

Sound:
<table>
<thead>
<tr>
<th>Frame</th>
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<tbody>
<tr>
<td>47a</td>
<td>Child looks up at Thokolosi. Slow zoom into her eye.</td>
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<tr>
<td>47b</td>
<td>Thokolosi frame slides in from the left and stops halfway. They look at each other for a while then scene fades.</td>
</tr>
<tr>
<td>48</td>
<td>Girl: &quot;So what happened to Jonpana?&quot;</td>
</tr>
<tr>
<td>49</td>
<td>Granny: &quot;Nobody really knows my habits,&quot; Girl: &quot;And Thokolosi?&quot;</td>
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**Sound:**

- Empty

**Dialogue:**

- Empty
50

Dialogue:
Granny: "Well it was said that the little girl became good friends with Thokolosi and it protected her all her life."

Sound: Granny stands up as she is talking.

51

Dialogue:
Granny: "Anyway it bedtime, baby.
Granny kisses her on the forehead.

Sound:

52

Dialogue:
Granny walks out the door, closing it behind her but leaving a small crack.

Sound: Creaking door.
FADE TO BLACK

53

Dialogue:
Fade to gray-black as Granny opens the door and enters the very dimly lit room. She is singing something.

Sound: Creaking door
54

Dialogue:
Granny POV as she looks around the room.
She is casting a shadow into the room.
She walks into the room.

Sound:

55

Dialogue:
She puts the plate down on the floor.

Sound:

56

Dialogue:
She puts the plate on the floor.

Sound:

57a

Dialogue:
She is standing in front of the plate. Camera then moves up.

Sound:
57b

Dialogue:
Granny looks confused. She hears a sound coming from another room and runs her head

Sound: Commotion

58

Dialogue:
Granny walks up to the child's door and peeks in through the crack

Sound: Commotion continues

59

Dialogue:
Look out from Granny's eye, peering into the room. The girl is sitting on the floor laughing

Sound: Giggling

60

Dialogue:
Granny turns away from the door. A smile forms across her face. She walks off to the left of the frame. Fade to Black

Sound:
APPENDIX C

Production Stills
APPENDIX D

Character Comparisons
When designing the characters for “Thokolosi,” I started out with realistic-looking characters but soon realized that they would be too much work for me to do by myself within the time I had.

**Section I: Thokolosi**

I started with the head when I began modeling the Thokolosi character. I basically modeled it straight out of my head and tweaked it as I went along. I knew I wanted him to have an upturned nose and large eyes and the other details come out as I modeled. The body was based on a realistic, slim human male body. I used actual photo reference of a slim man for the body. See Figure 1 for the initial model.

I actually liked the way the model had turned out at this stage. The only problem I really had with the model thus far was that he looked too tall and skinny and Thokolosi is supposed to be only three feet tall. The proportions of this model were not quite right for what I wanted so I decided to shorten the legs but keep the arms the same. This made him look short and squat but the long arms gave him an almost ape like feel. This was good
because I didn’t want him to look too human. Figure 2 shows the model with the shortened legs.

![Figure 7: Legs are shorter to throw off proportions](image)

Figures 3 and 4 show a closeup of the head and the teeth. I really wanted him to have nasty, scary teeth and I went a little crazy in modeling them but I think they came out very well indeed.

![Figure 8: Head Closeup](image)

![Figure 9: Teeth Closeup](image)
The cartoony model was nowhere near as complex as the first model but I believe that it still had a lot of character to it. Below are two images of the redesigned Thokolosi model.

Figure 10: New Thokolosi Design

Figure 11: Thokolosi Pose Test
The new design went in quite a different direction than the original one but kept some of the features of the first one like the long arms, big eyes and the teeth.

**Section II: Grandfather**

For the Grandmother character I started with the head and worked my way down the body. I used photo reference for the head of the model and then I made up the rest of the body as I went.

I really liked the way that the model was turning out; I felt that she had a kind face, the kind of face that reminded me of my own grandmother. Getting her rigged would have been very time consuming because of all the soft tissue on her face and neck that would have to move to make her feel alive. And she also had a skirt that would need some cloth simulation. In the version of Maya I was using at that time, the cloth solver was very buggy and unusable. I hated to have to change this model because of how much I liked it but I’m sure I will use her for a different project at some point.

Figure 9 below shows the completed grandmother model. I had even laid out the UVs on the model; she just needed texture maps and a rig.
Figure 14: The finished Grandmother model
The Grandfather model was a complete change from the Grandmother but it was necessary in order for me to be able to do the voices.

Figure 15: The finished Grandfather model

**Section III: Sangoma**

The original Sangoma model (Fig. 11) was the most complex model I had made for the film. I wanted him to be really skinny as if he hadn’t eaten in weeks. To get that kind of detail I needed to use a lot of geometry and as a result, this model had the highest poly count of all the character models.

The horns on his head made it into the film on the redesigned Sangoma model. The original model was obviously not goofy like the cartoon version and I think the Sangoma scene would have taken a very serious tone if I had kept the first model. I decided to make it less serious when I redesigned the character models because I didn’t think that being too serious would fit with the cartoony nature of the new characters.
Figure 16: The original Sangoma model

Figure 17: Sangoma head closeup
While the realistic version of Sangoma was designed to be quite tall in stature, probably somewhere around six feet, nine inches. This coupled with his skinny physique would have made him quite “lanky” and awkward and that would have made him more interesting. For the cartoon version (Fig. 14), I decided to make him short and skinny to add to his goofy nature. I wanted his small size and overly large horns to make him seem like he had a “small man complex.”
**Section IV: Mompati**

With Mompati, I needed him to be quite attractive so I initially chose to make him muscular and I dressed him in a leather biker’s outfit (Fig. 16). He was also originally supposed to ride a motorcycle (Fig. 15) on his way to go and see the Sangoma. I had the motorcycle modeled and rigged but it ended up not being used.

![Figure 20: The bike model that was eventually scrapped from the film.](image)

Mompati himself was always meant to be bald with a goatee beard. I had originally decided to make the goatee using fur but once again, I was not confident enough with Maya Fur to put it into production. I eventually decided against using it and just painted a “5 o’clock shadow” into the texture map.

The cartoon version (Fig. 17) maintained the bald head and 5 o’clock shadow. I decided against putting him in the biking outfit since I wasn’t using the motorcycle anymore. Instead, I gave him a pair of jeans and a turtleneck sweater. I adjusted the original cowboy boots to fit him.

Unlike the other cartoon characters with narrow shoulders, I gave Mompati wider shoulders and a narrower waist to give him a more muscular look. For his face, I gave him more defined cheekbones and a strong jaw line to accentuate his looks.
Figure 21: The original Mompati model.

Figure 22: The cartoony version
**Section V: Thabo**

The Thabo model underwent the most drastic change after the Grandmother. Originally, Thabo was a fat, ugly man with a missing finger when I first modeled him (Fig. 18). The reason for this was to make him less attractive than Mompati and add to Mompati’s fury when the woman chose Thabo.

I dressed him in a “wife beater” and tight shorts along with some slippers and a hat. This is a very strange outfit but I liked the weirdness of it. It makes you ask yourself why the woman would want such a strange and unattractive man. The missing finger was a decision I made after the model was completed. This is supposed to add to his imperfection as a man. Looking back now, it might have been too much.

When I redesigned him, I wanted to make him a little less ugly and also make him feel more educated. The problem with the original model is that he had no redeeming qualities; he was just an ugly man who for some reason was liked by the woman. With the cartoon version, I wanted there to be more to him, I wanted it to be evident why he would be chosen over someone better looking than him.
I gave him the narrow shoulders (Fig. 19) because I didn’t want him to seem athletic. I dressed him in a college sweater and khakis with dress shoes. I wanted him to feel like an intellectual. In the film he plays the guitar, further increasing his appeal.

Figure 24: The new Thabo model.

Section VI: Woman

The woman character started out looking quite different from what she ended up looking like in the film. She was initially more full figured as she was modeled after a real woman that I used for photo reference. I wanted her to be an everyday, real woman that you might see on the street and not a woman who looked like she belonged on the cover of Playboy magazine (Fig 20).

She was originally dressed in a sweater, capri jeans and knee high boots to make her look sexy. She also had on a leather cap and shades to add to her sense of style. I wanted her to be stylish and well dressed to help make you understand part of the reason why someone would like her as much as Mompati and Thabo did.
When I redesigned her, I wanted her to remain sexy but fit within the unrealistic/cartoon world that I was creating. I decided to give her a very small waist and relatively large breasts along with wide hips and a large posterior. I gave her high heels because I have always found heels to be attractive. I pushed the “sexy” factor a lot further on the cartoony version and exaggerated things to a higher degree (Fig. 21).
Section VII: Young Grandfather/Grandson

These two characters were never modeled initially because I decided to start again just before I began working on them. The Grandson was originally going to be a Granddaughter and since the Grandfather started out as a Grandmother, the young version would have obviously been female too.

The two models are very similar because they came from the same model. I adjusted the models to get two somewhat different characters that share some features because they are related (Fig. 22).

Figure 27: The Two Young Characters.