



The Making of Mickey's Buddy

Pete Paquette



Foreword

My original premise of "Mickey's Buddy" is based on a true story of a man's amazing relationship with his dog. I was visiting Mickey over Christmas 2001, only days after his wife had passed away. His dog Buddy was his only comfort, and the bond between them seemed to strengthen after their loss. He would talk to Buddy, and Buddy would answer with a few sharp barks. Mickey would repeat what the dog said to him and address his concerns. This conversation would go on for several minutes and nine out of ten times, Mickey knew what Buddy was saying. After spending a few days with him I knew this would make a great story. I modified it a bit, but it still revolves around the premise of the bond between Mickey and Buddy.





Characters



Mickey



Mickey has gone through a lot over the past couple of years. He retired about three years ago. His instilled work ethic caused him to become anxious and irritable. Not long after, his wife passed on, which was hard on him and his dog. His dog was the only thing that represented the way things used to be or "The Good Ol' Days". Unfortunately, Buddy got loose from his collar one day and was hit by a passing car. Unable to let go of the past, Mickey began treating his childhood toy as a pet. This regression was a defense mechanism for his recent life changes. He cares for "Buddy" as if it were a real dog, which gets him strange looks when he takes him for a walk. Other people see him as strange and secretive, which in turn makes them afraid to become more than acquaintances. He was born into the age of The Great Depression, which made him a paranoid man of capitalist people and the government. He constantly dwells upon the way things used to be and lives in a delusional parallel world of these memories.



Toy Buddy

There is not much to say about the Toy Buddy except that I had a real strong sense of what I wanted him to look like since the first day I thought of the premise for this story. If you look at the images, you can tell he hasn't changed much from the beginning.



Buddy



Buddy is a 6 month old French Bulldog mix that has lived in the streets since his last family brought him to a dark alleyway and left him there. Since then he has been on a constant search for a family to take care of him. Most consider him the "neighborhood dog" and give him food occasionally. Buddy is appreciative of the kind gestures, but he wants the warm feeling of a family that he remembers as a small pup. Most play with him for a few minutes and then leave, never wanting to claim responsibility. Buddy has become accustomed to this way of life and figures he'll never find family again.



Pre-production:

“A void in one’s life can alter
thier sense of reality.”



Research Summary

My story came about somewhat by accident. I was home during Christmas break being aware of my surroundings and searching for whatever could be a good story topic for a thesis idea. My wife's grandmother recently passed away leaving behind her grandfather (Mickey) and his dog (Buddy). After hanging around there for a couple of weeks, I was simply amazed by Mickey's relationship with his dog. He could have full blown conversations with this dog as if he were speaking with you or me. It didn't strike me until the plane ride home what potential this situation held. I realized that nobody could understand the dog like Mickey could, as if the dog were a toy or something. I didn't want to use the same breed of dog as Buddy because he was a Maltese and that would be a huge technical issue with all his fur. I found the breed of dog I wanted to use upon arrival conveniently at the airport. A Boston Terrier.

I began my research on a rather broad stroke. I needed to know how to draw a dog convincingly to show good weight and force in my storyboards. So I began looking up the anatomy of a dog. I then needed to apply this to the character design I created. After pitching this idea to Karen, she told me I needed perform more research on Mickey's mental state and whether or not this type of reaction to a stressful event exists. I turned my attention to studying the psychology of defense mechanisms (both mild and severe). I found that in the face of severe stress, and when mechanisms fail, there is a severe form of defense called regression. Regression is a severe form of defense mechanism when a person acts as if they were a child. Karen told me to find more forms of reference and she directed me to go watch Ron Howard's "A Beautiful Mind". I found it to be a wonderful form of reference dealing with perception, and helped me to show "nothing is wrong" in my character, when in reality there was something very wrong.

Another issue touched upon was the question of why this piece should be done in animation. Karen told me to that Pixar's "Geri's Game" would be a good reference for me to look into and find out why I think it was done in animation. After the initial animatic critique, it was suggested that I made the real Buddy into a pitiful junkyard dog. So I immediately began changing my design to be a more skinny, ragged version of my Boston Terrier. I didn't come up with a design I was happy with until a year and a whole lot of drawings later.



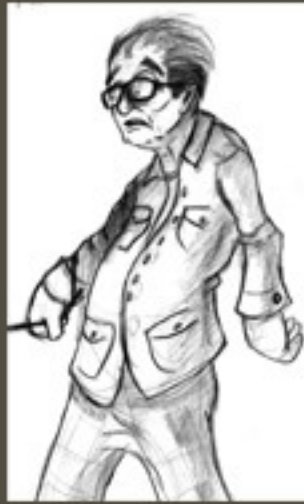
Influences



Influences



The Evolution of Mickey



Toy Buddy

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Environments



Influences





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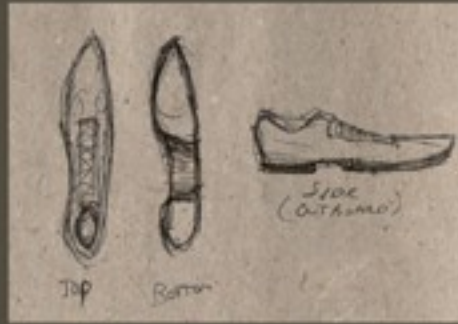
string $IkFix = `button -label "Ik Fix" -w 30 -h 30 -vis 1 -command "select -r Buddy_Ctrl_BkTweak";
string $IM = `image -i "C:/Documents and Settings/Pete Paquette/My Documents/maya/projects/Mickeys_Buddy/data/dogbi
formLayout -cdt
-attachForm $sel "top" 350
-attachForm $sel "left" 120
-attachForm $IM "top" 0
-attachForm $IM "left" 0
-attachForm $N2 "top" 40
-attachForm $N2 "left" 140
-attachForm $N "top" 70
-attachForm $N "left" 140
-attachForm $B3 "top" 100
-attachForm $B3 "left" 140
-attachForm $B2 "top" 130
-attachForm $B2 "left" 140
-attachForm $B1 "top" 160
-attachForm $B1 "left" 140
-attachForm $Rc "top" 190
-attachForm $Rc "left" 140
-attachForm $Kps "top" 300
-attachForm $Kps "left" 140
-attachForm $Ly "top" 30
-attachForm $Ly "left" 60
-attachForm $Tk "top" 30
-attachForm $Tk "left" 210
-attachForm $Rfp "top" 120
-attachForm $Rfp "left" 260
-attachForm $Lfp "top" 120
-attachForm $Lfp "left" 20
-attachForm $Rrp "top" 270
-attachForm $Rrp "left" 240
-attachForm $Lrp "top" 270
-attachForm $Lrp "left" 40
-attachForm $Ikfw "top" 150
-attachForm $Ikfw "left" 210
$form;
global proc keypose ()
{
setKeyframe -breakdown 0 -hierarchy none -controlPoints 0 -shape 0 |"Buddy_CTL_L_Hindleg", "Buddy_CTL_R_Hindleg", "B
setKeyframe "Buddy_R_HindPV.tx";
setKeyframe "Buddy_R_ForePV.tx";
setKeyframe "Buddy_L_ForePV.tx";
setKeyframe "Buddy_L_HindPV.tx";
setKeyframe "Buddy_R_HindPV.ty";
setKeyframe "Buddy_R_ForePV.ty";
setKeyframe "Buddy_L_ForePV.ty";
setKeyframe "Buddy_L_HindPV.ty";
setKeyframe "Buddy_R_HindPV.tz";
setKeyframe "Buddy_R_ForePV.tz";
setKeyframe "Buddy_L_ForePV.tz";
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}
global proc scul
{

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Technical



Mickey Design Notes



Various Rigging Notes



Mickey



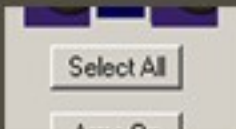
GUI (Graphical User Interface)

I decided to create an interface with selection buttons to cut down on mouse travel in 3d space to select handles. I've also implemented several features to make the animation process more efficient.



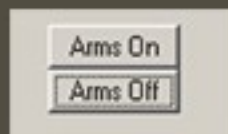
Key Button

I like to animate the body first then work my way out to the extremities, ending with the eye and mouth and finger animation. I have made key buttons to key the pose (the one in between the feet selection buttons), to key the eyes and the lip synch.



Select All Button

This button came in really handy when I was working with one or more characters in the scene and needed to change the timing on a specific character in the dopesheet.



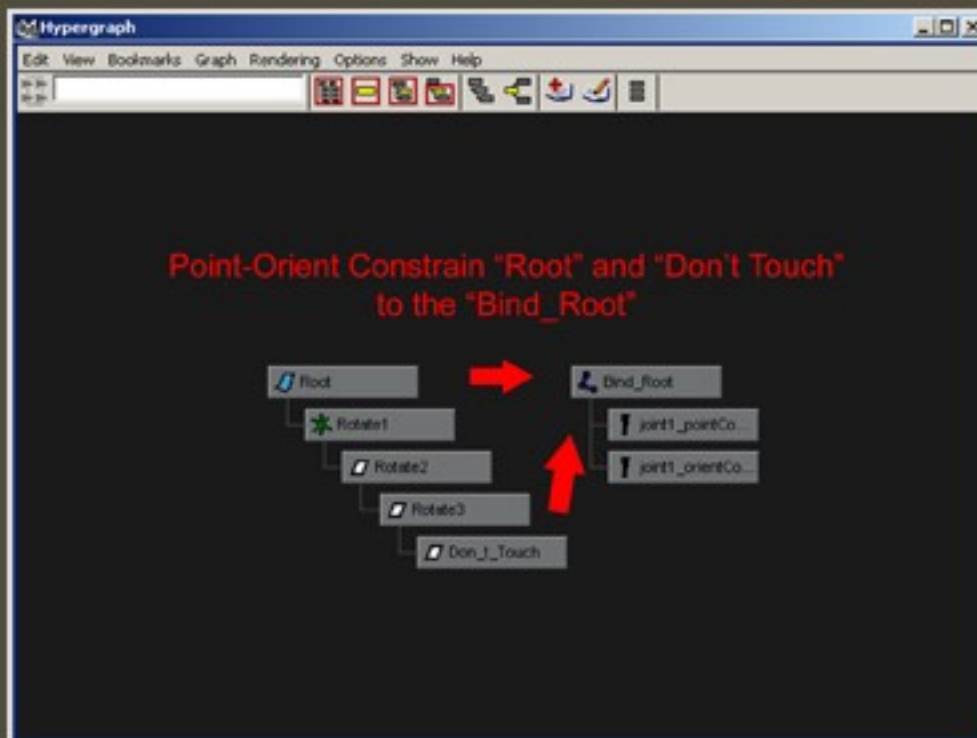
Arms On/Off Buttons

Sometimes when in the beginning stages of animation refinement, the arms can be especially distracting. I made them disappear at the click of a button.



Multiple Rotate Nodes

Animating in gimbal mode is the best way to animate because it gives the most accurate reading in the graph editor. The only problem with gimbal is when you rotate in the Y axis, you'll end up going into something called "gimbal lock". This is when the X and Z rotations share the same axis. Creating these nodes enable you to separate the rotations into separate nodes. In order to create this effectively, you create your root with your auto joint orient set to none. You then create a nurbs sphere and snap it to the root joint and freeze transformations, delete history. You do the same thing with a locator or control curve. Duplicate the locator as many times as you want rotate nodes, plus one extra. You then set up a hierarchy with the sphere at the top and the locators parented to themselves all the way down. You then point-orient constrain the sphere to the root joint and do the same with the bottom locator on the hierarchy. Lock and hide the animatable attributes on the bottom locator and NEVER animate it. Label the sphere "root" and label the descending locators "rotate1, 2, 3 ect." Parent a few back joints to test it out. The result is each rotate node made creates another way to animate the root's rotations. See the chart below if this sounds confusing.



Buddy

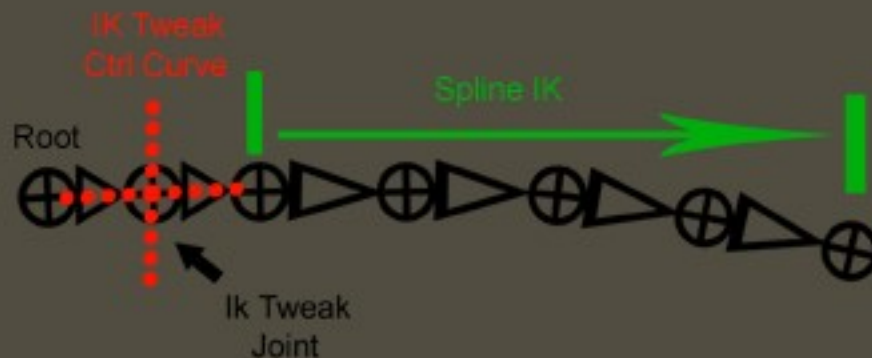


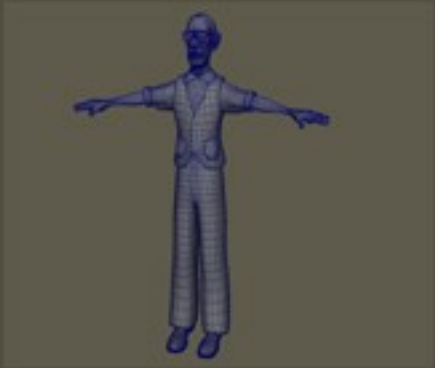
GUI (Graphical User Interface)

Like Mickey, I decided to create an interface to speed up the animation process. The features on this interface are not unlike Mickey's GUI. The "Select All" feature still exists in Buddy's Interface along with the "Key All" button. There is an "IK Fix" button that its use is explained in the entry below.

IK Offset

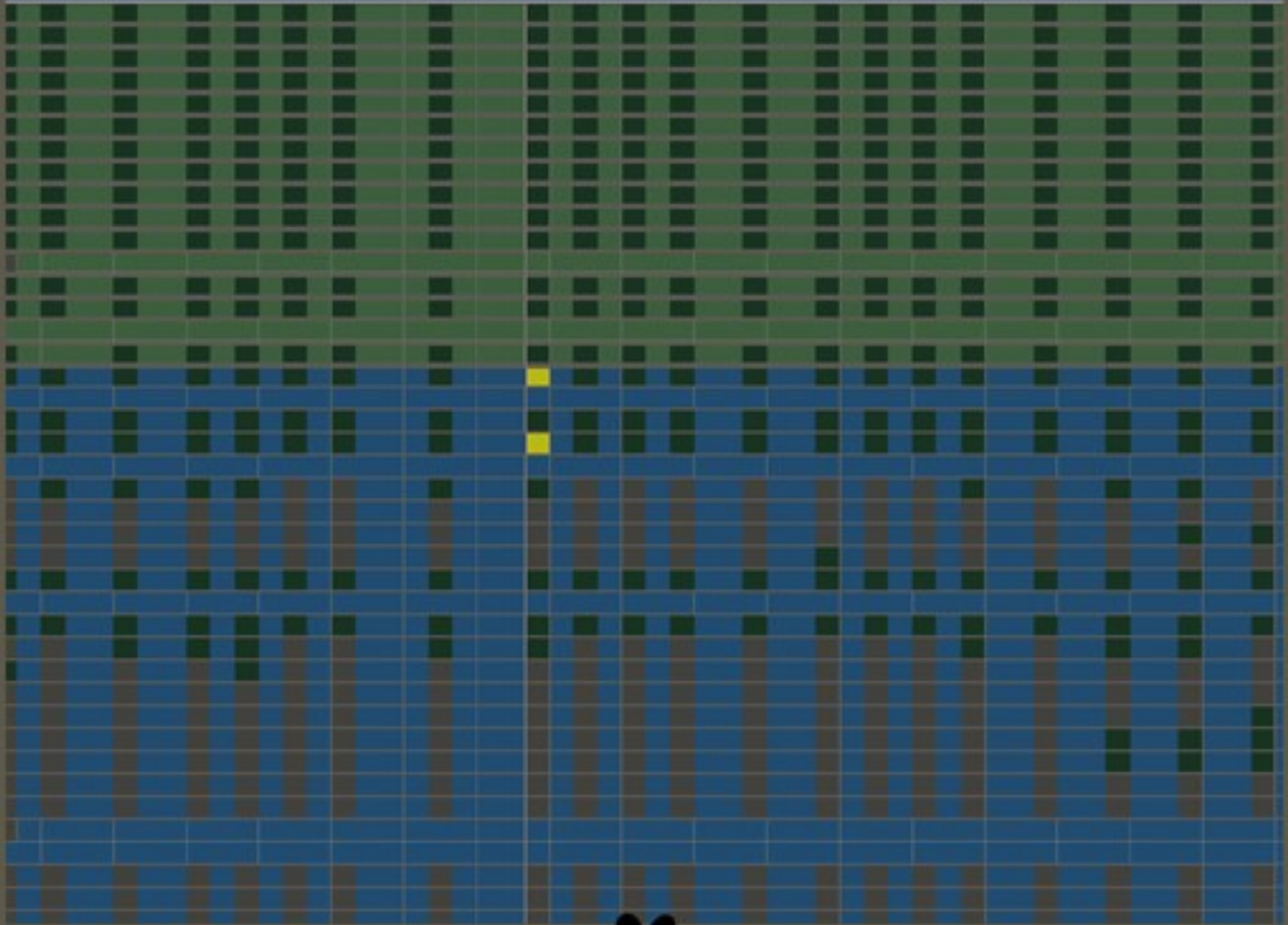
This can get a little confusing but I figured out a way to rig a quadruped so there is only one node to counter animate, opposed to several. Use the diagram below to follow. I put the root in the dog's chest and had a spline IK chain go down his back to his hind hips. I took a curve and parented it to itself and point constrained the group to the ik tweak joint just above the spline IK base joint. This was to ensure the curve would stay with the rig. I then orient constrained the Ik Tweak Joint to the curve. This made any joint below the root keep the rotation values of the curve, and any rotation of the root remained isolated. This trick helped to keep counter animation minimal. The only counter animation that took place was when the root was translated, I would rotate the Ik Tweak Ctrl Curve in the opposite direction. For instance if I was to animate the root in the Trans X, the entire chain would follow, so I would counter animate the rotate Y on the IK Tweak Ctrl Curve to keep the back end in its place. If I was to rotate the root however, everything from the Ik Tweak Joint on down would remain in place because the IK Tweak Joint is reading the rotation values of the IK Tweak Control Curve because of the orient constraint.







Animation



Buddy



Animating Buddy was one of the most challenging aspects of the film. Studying hours of dog reference was not enough. There seemed to be this randomness of thought in the dog that I couldn't pinpoint. What helped me break into the dog's mind was a book I casually picked up one day with various quotes about dog's behavior. The one that stuck with me went something like this:

"You ever have that feeling when you walk into a room and totally forget why you walked in there? That must be how a dog feels all the time."

This helped me to portray the spastic attention span of the dog, and how Mickey seemed to keep the dog interested even after the object of Buddy's desire had been destroyed.

Mickey



Animating Mickey was a pleasant experience because his character was based off a man named "Mickey" Frietag who just so happens to have a dog named Buddy. Actually knowing Mickey's character to this level of understanding helped me to animate character traits such as him adjusting his glasses or drumming his fingers on his lap.

Knowing the real Mickey was a major factor in his character animation, but there was also the factor of selling the fact that he was old. I had the privilege to work with Stephen Barnes this past summer. Stephen was a veteran animator from Pixar and worked on every film from "A Bug's Life" to "Monsters Inc." He also worked on the Academy Award winning animated short "Ger's Game". The animation tips he gave me for animating an elderly person were so resourceful, I included them on the next page.



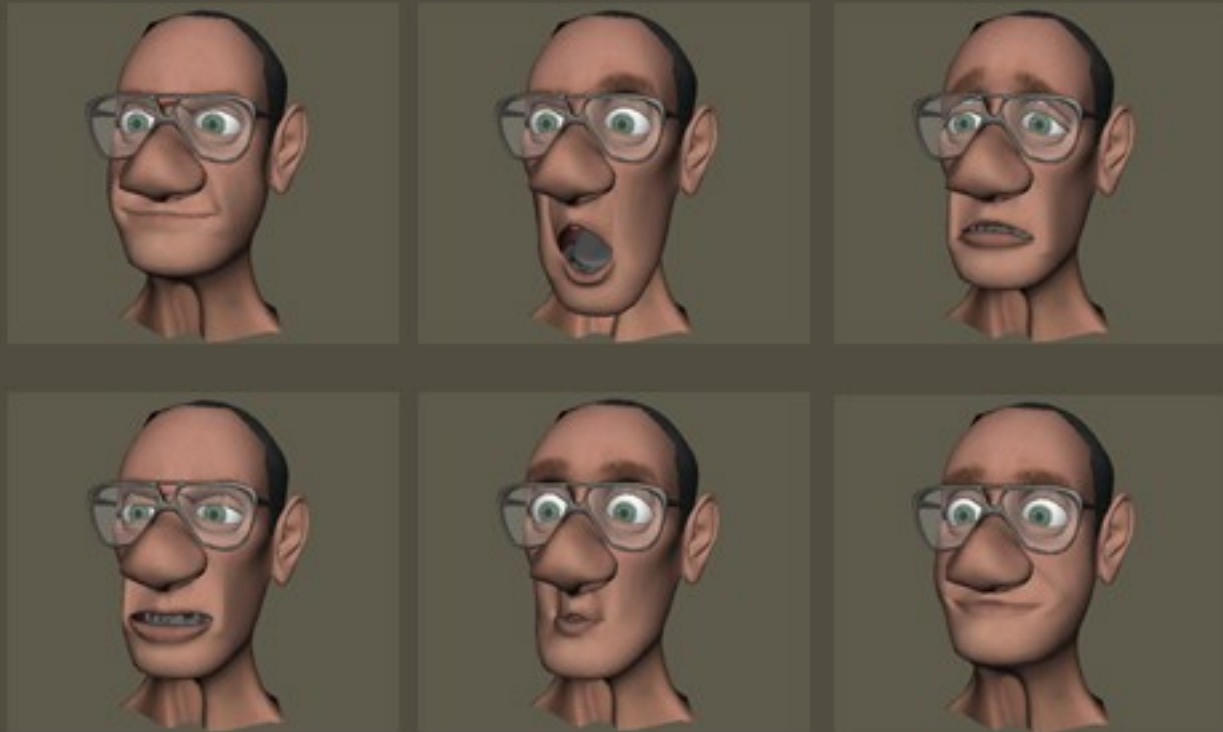
Stephen Barnes' "Tricks to animating the elderly"

- Perhaps the best reference you have is your own personal experiences with your grandparents. The best compliment you can get when animating an old person is "Hey, he (she) reminds me of my grandfather (mother)."
- Be sure to allow ample time for your character to think before doing anything. The elderly tend to have to think longer about what they're gonna do before hand.
- Don't be afraid to keep the pacing of the animation really slow to really sell the idea that this person is old.
- Seeing pauses in a movement that should be fluid helps sell the old factor as well.
- Old people have a very limited range of movement.
- Figure out a ways to create trembling or randomness in the joints, to give the old shaky feeling.
- Add a little more searching in the eyes to help portray the scattered thought processes.
- Be sure not to use many straight poses. Use hunching curvilinear poses to imply weakness.
- Do alot of closed mouth animation. Show the plasticity of the lips, but never open the mouth to give the feeling of no teeth.
- Remember elderly people move the way they do because they're in pain.



Mickey's Blend Shapes

Unlike Buddy, Mickey had many blend shapes from his jaw control to his adam's apple. With extreme attention to detail, I ensured that everything on his face moved somewhat and not just his mouth. For instance, I studied the way a person's ears move when they pronounce an "E" phoneme or a smile, and how that specific ear movement differed from the movement effected by simply opening his jaw. To add extra realism, I made several set driven keys on his glasses, so they didn't simply sit on his face. I wanted his glasses to move with the bulges of his face without collisions. I was extremely happy with the end result.



Buddy's Blend Shapes

I animated buddy with very little facial expression. I did it mainly through gesture and his ears. The reason for his lack of expression was because of the size of his eyes. I did a test where his eyes changed scale with his eyebrows and the result was rather disturbing and uncomfortable to look at, so I decided against it. Trying to portray emotion without the portal of facial expression was the hardest part of animating the film.



Ears Twist Back



Ears Default



Ears Back



Eyebrows Down



Eyebrows Up



Default



Mouth Open



Mouth Closed



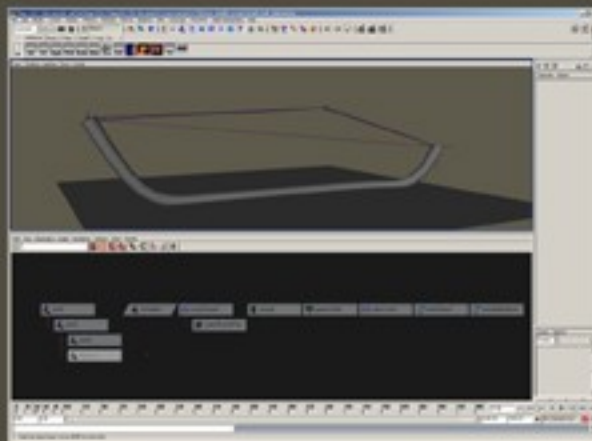


All Together
Now!



The Leash

This was by far the most challenging (and most procrastinated) problem in my film. I didn't begin researching methods for executing the leash until the animation was finished for the most part. I wanted to ensure whatever solution I came to would be able to handle any situation without crashing or freaking out. The first method I came across was where you would bind a curve to a joint system with an IK handle on it. You would then create an extrude using the curve and keep the history on it. You would make the curve a soft body and weight the cv's on the curve only on both ends. The end result was favorable, but by no means useful for a leash. If the dog was tied to a doghouse or something stationary, this would've worked beautifully. I needed both ends to move, and when I tested this rig on a scene where Mickey is dragging his toy, the extrude blew up.



Soft Body Method



Maya Cloth

There were other method I toyed with and I even debated animating the leash by hand, but a friend of mine persuaded me to try Maya cloth. I was very skeptical because I had researched cloth for Mickey over the summer and the end result was always a nightmare. Reading about transform constrains redeemed my confidence in cloth. The way it works is you create locators and "transform constrain" the verticies you want to the locators, and magically the verticies would follow. I did a quick test and it worked like a charm. The only "theory" I ran into was that you are supposed to be able to parent the locators to a joint if you wanted to. Everytime I tried this, the ends would stay a fixed distance from the point I needed it to be. My solution; to turn on auto key and point snap the locators to the joints I wanted. It was grunt work, but it ran beautifully.



Lighting

Lighting for a black and white film is much different than lighting for color. The most important thing about lighting a black and white film is to distinguish the characters from the background. There are a few methods that will help achieve this. One of them is keeping constant attention to the figure-ground relationship. If your character is darker in value or in shadow, ensure they are against a darker background. If the character is brighter, ensure they are against a darker background.

Another method that's commonly used was the use of color to get the correct value you are going for. It was common for sets to be colored in different shades of blue, popping out the warm colored characters that crossed in front of them.

The other method that is used is fairly new, where you implement the slightest of color to the character. Not enough to be noticeably color, but not fully desaturated like the backgrounds. This was the method I used.

A very useful tool for lighting in a black and white scenario is the rim light. This helps to keep the character silhouetted and therefore pop out of the background. The diagram below shows how I approached lighting the character in this particular shot.



Fig. 90 Wrong



Fig. 91 Right

Point Light (Rim)



Mickey



Spotlight (Fill)



Spotlight (Key)



Voice Talent

Good voice talent is hard to find. They must put themselves in situations that don't exist in the padded twenty square foot room of the sound booth. The voice of Mickey was done by my talented friend Somchi Greene. He also did the audio for John Hawkins film "Who Wears the Pants?" and various outtakes for other student films. He portrayed Mickey exactly as I wanted, an old man happy in his current situation regardless of the reality of it.



Compositing

I originally wanted to do the entire film in black and white, but then I watched the making of "Pleasantville" and they were talking about their methods to keep the characters distinguished from the backgrounds. They applied the slightest hint of color to the main characters. I was taken by this method applied it. I also faded out the edges of the frame to give it a projection feeling to it. I also added some film grain...not enough to look like a distorted old film but enough to give it a gritty feeling.



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