The Marsh

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The Marsh

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Submitted in partial fulfillment of the
Requirements for the degree
Master of Fine Arts

MFA Imaging Arts/Computer Animation
SCHOOL OF FILM AND ANIMATION
ROCHESTER INSTITUTE OF TECHNOLOGY
ROCHESTER, NEW YORK
May 20, 2002

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5/21/2002

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Thesis Report

The Marsh
Narrative Development

My thesis began with an idea put into writing in the fall of 1997. I wrote a poem using a marsh as a metaphor for a number of ideas I held to be true at the time of writing. The poem was an attempt to describe the ambiguous relationship between humanity and the natural world, the mystery and workings of nature and the human mind, and the sloppy way in which the universe appears to be ordered on the surface while its true mechanisms hum away beneath. The writing comments on the sense of loneliness that can be an inherent part of existence. The poem was also a momento mori piece with that reality lurking ever behind the principal themes.

When asked to begin submitting thesis ideas during the spring of 2000, I had no idea where to begin. Striving in my limited way to make films that were meaningful, I hoped with my thesis to be able to produce something that would be both interesting to watch and would contain multiple layers of content. I decided to re-explore personal ideas that I believed in. Knowing that the project would be a long time commitment, something capable of sustaining my interest had to be found. The poem struck me as still being relevant and I thought its visualization would be fascinating to create. The problem became how to adapt the abstract thought conveyed in the writing into animation.

I pared down the themes of the original writing and translated the remaining subject matter into visual metaphors. The focus became the relationship between our kind and the rest of the natural world. In the process, some of the darker psychological aspects of the original poem evolved into an illustration of the change
in societal values over time. To support this, historical context became more important than it had been in the poem, which was more universal in its tone. Departing from the original text by including very specific cultural references to signify particular periods in human intellectual and technological development, I tried to keep some of the poem’s mystery and its sense that nature and time have a rhythm or order. The momento mori remained, if somewhat muted in comparison to the poem.

My idea would be communicated in a non-character based narrative progression showing the same marsh during three phases of human history. These phases would be divided by submarine travel through the water and peat, and show the natural evolution of the marsh and the archiving of human experience within it. The narrative process continued through the entire making of the film and I received both encouragement and creative guidance from Skip Battaglia, Marla Schewpepe and Johnny Robinson throughout. Only now, after the film’s completion, am I able to provide an accurate synopsis of it.

The Story

The opening of the film takes place during autumn in front of a crannog; an ancient Celtic dwelling built on an artificial island in a marsh. We witness a simple burial ceremony and the body of a man is committed to the waters. When the body sinks below the surface, the camera follows him down, thus beginning the thrice-repeated cycle of following an object placed by humans into the marsh.

Fish inspect the newcomer for a moment, and then one darts to the left and the camera follows, thus beginning the first “underworld” cycle in which the point of view rotates 360 degrees. The view is obscured by peat which breaks away intermittently to reveal vignettes of marsh activity and scenery. The completion of
the first cycle returns us to the sunken body of the man. The peat presses down on the body and it is mummified in a speeded up version of the natural process.

The camera now moves upward, retracing the path of its earlier submersion. We see that the mummy’s culture (the crannog) has also been archived in the peat in a layer above, then we punch through the peat into the underwater world.

The camera stops moving after it breaks the surface of the water and reveals the world above again, this time during the spring season. A manor house is in the distance, and trees have been cleared. A thief walks through the scene and stumbles, dropping several precious items into the water. One of the items is a painting of a woman. The painting becomes the second object to sink into the marsh and the second cycle of following a sinking object ends with pollywogs inspecting it.

During the pollywogs’ inspection of the painting, the second 360-degree camera rotation begins and, once again, we see various archived objects and creatures. The rotation ends again on the sunken man who is now completely mummified.

The camera begins its second upward ascent showing us the crannog again and pauses when the painting comes into view. The peat presses in on the painting and it corrodes in the same manner as the sunken man.

The camera continues its ascent, punching through the peat again into the underwater world. This time it is a summer night and as the camera breaks the surface of the water emerging in the world above, we see that a service station has been built in the marsh and a city can be seen in the distance. The service station is abandoned and the surrounding pavement is eroding into the water.

An automobile rolls into view, obscuring the station. In the gap between the car and the asphalt pavement, a rolled carpet is seen hitting the ground. It is then dragged out of frame by unseen hands, wriggling and squirming as it goes. A
muffled screaming is heard as the carpet is dragged out of the frame and thrown into
the water.

The camera begins its third cycle of descent. The carpet wiggles as the
person inside struggles. When the carpet bumps the bottom of the marsh, the
person inside gets free, kicking off his shoe and the tether that had bound his legs in
the process. The camera follows his cast-off shoe until it settles.

As a fish investigates the shoe, a third cycle of 360-degree movement begins
only to fade to black, implying a never-ending repetition of this process.

**Aesthetic Development**

I had the luck of spending a lot of time in a salt marsh while growing up, and
the sounds, colors, beauty and somber, timeless nature of the place made an
impression on me. The film was meant to convey these attributes, so efforts were
made to create a look that suggested my impressions. I associate the marsh with
earthy hues and my storyboard reflected this with its browns, greens and ochres. As
the look of the film was being developed, the original muted earth tones became
primarily designated to the world beneath the surface, with a murky green becoming
predominant. The world above the surface came to have three individual palettes,
one descriptive of each of the time periods encapsulated by shots in the film. The
opening shot with the crannog and funeral procession takes place on a misty autumn
day so the colors include muted greys and ochres, similar to the storyboard hues,
but also came to incorporate bright autumnal reds and yellows in the background
foliage. The shot with the manor house in the background and a thief who drops
objects into the marsh takes place on a sunny spring day. The grass tones are fresh
and green, the sky is blue and dotted with white clouds and the calm water is a deep
emerald-blue. The shot containing the service station takes place in the summer at
night. The cool, blue and shadowy tones are contrasted by the brightness of the moon, city lights and the headlights of the automobile.

My experiences producing other animated short films and class projects were drawn upon for guidance in executing the piece. A complete novice in animation at the time of my arrival, since coming to RIT I have experimented in the use of several animation techniques. My first film, “Ol’ Doc Segrams’s Place” was entirely hand-drawn 2D and played with the juxtaposition of muted sepia tones and bright colors to convey a sense of division between the two environments or “worlds” created for the film. The most aesthetically successful elements of my first film were the application of an illustrative style to the background scenery and the chromatic effect attained by using PhotoShop.

After the first film I began experimenting with combining 2D hand drawn animation with 3D. My second film, “Sylvia” was a product of this experimentation. Expressionistic, gestural hand-drawn character animation was combined with hard-edged 3D backgrounds. The 2D character animation was black and white, and executed in a nervous line style. The 3D backgrounds were muted in color in the film’s first environment (an austere city), and dark, rich and vibrant in the second environment (a preternatural forest). Once again, the juxtaposition of two different worlds was being examined. The character didn’t fit in either world, until she transformed herself. Until she was integrated into the forest in the last shot, she was in contrast with her environment, uncomfortable and without peace.

A lot was learned from the first two films and earlier related experiments. This knowledge was applied to the thesis project. The whole film needed to have an aesthetically unified look, like the first film. It was known at the onset that 2D and 3D animation would be combined, an approach used for the second film. Unlike the second film, 2D and 3D techniques would be combined for practical rather than conceptual reasons. Hand-drawn animation would be used for all the moving human
characters in order to give them the fluidity of movement and level of expression that I am able to more easily attain with 2D animation. 3D techniques would be used for camera angle and perspective shifts, and the tracking of rotating objects through space. Simply put, 2D techniques were applied where it was thought 2D would be best suited and 3D techniques were used where they would be most effective. The inherent differences between the look of 2D components and 3D components made creating a unified look to the film very challenging.

In order to integrate 2D elements and 3D elements into the same scene, ways of either making 2D look more volumetric or making 3D look flatter had to be developed. Though in most cases the latter was found to be technically easier (one applies shaders or filters that help in the process), both techniques ended up being utilized, and the formula was followed as to which places one method would be more fitting than the other.

Another way of combining the two styles was to make the majority of the 3D texture maps by hand, using the same approach employed for all the drawings. This was probably the most important and effective technique used for visual integration because my drawing style and graphic sensibility shows up on the surface of every 3D object, helping them to match the 2D hand-drawn portions.

Once the 2D and 3D elements for a given scene were completed, they all needed to be put together and this was done by layering them in Adobe After Effects. The lowest layer would be the background, and the layers would build cumulatively up from there with the foreground elements on top. For instance, in the opening scene, the grass and cattails in the foreground are a 3D element that has a filter applied to it to make it flatter. The mist is all 2D files that have had their opacity and position animated over time. The water is 2D, the people are 2D, the object they carry (the body) is 3D, the shroud over the body is 2D, the crannog is 3D with a filter applied and the background is 2D, with more layers of 2D mist. By
applying hand-drawn textures to all the 3D elements the colors and hues all relate and by applying filters to the 3D objects they look a little more two-dimensional. A lot of trial and error, adjustment and revision were necessary for many of the earlier, more formative scenes. The end effect, hopefully, is that the viewer looks at the scenes as a whole and isn’t entirely aware of what elements are 2D and what are 3D and, most importantly, the viewer isn’t distracted by the combination of modes.

**The Cast**

Rather than have a character-based story I chose to concentrate on creating an environment and an atmosphere, and creating a sense of the passage of time. Because of this, there is no primary or “main” character that is followed through the entirety of the film. Instead, there is a range of characters that appear only briefly and tell their part of the tale. The true “main” character, if it had to be named, would be the marsh itself. Each character was chosen with a specific reason in mind.

The first creature we see is a stork feeding in the shallows. The bird was representative of the native life of the marsh, and, because of its symbolic meaning in Western folk tradition, was meant to represent the cycle of mortality. The stork is disrupted by human activity, as nature is disrupted by it. It flees the scene as a funerary retinue encroaches.

The people emerging from the crannog gate are dressed in earth tones except the leader, a druidic priestess who wears white to signify her spiritual position. The body they put into the water is more an object than a character, as it is devoid of life.

The fish that inspect the body are the next characters to be seen. They are menhaden, a species of fish I am personally familiar with as being a cast member of the marsh, and one of a number of species commonly termed “minnow”. The fish
are examples of the living denizens of the marsh and are seen in varying sizes and groupings throughout the film.

One of the sentiments concerning wetlands the film was intended to communicate concerns the unknown. As a boy, I often walked through peat-muck pits and murky tidal pools barefooted, wondering what it was that I was stepping on and whether it would pull me under the surface and devour me. The imagination, drawing on popular myth and snippets of actual history, conjured everything from pirates or bandits buried with their treasure to hideous marsh monsters laying in wait for unwitting passers-by. In the film, an attempt was made to represent this by including a fantasy creature that eats fish. The creature is textured to match the peat in which it lurks and is meant to represent the mystery of nature yet undiscovered and robbed of its magic by man.

The thief is dressed in clothes typical of the period and wears a roguish mask. Over the centuries a tradition has developed in which the wetlands at the edges of civilization are associated with outlawed activity. The thief and the implied gangsters later in the film represent this. Outlaws were also chosen to illustrate the difference between the attitudes of ancients who lived in and honored the marsh and later people who used it as an escape route, temporary hideout or dumping ground for the by-products of illicit activity.

When the painting sinks down it is investigated by pollywogs, rather than fish, to further illustrate the spring season in which the scene takes place and also to add a little more diversity to the marsh life. They behave in exactly the same way as the fish and are, more or less, the same character in a different guise.

The car’s shiny sleek appearance is meant to contrast the organic look of the grass, water and crumbling asphalt. It is a stand-in for the criminal underworld; its dark shape, which takes up the majority of the frame, is intended to be somewhat menacing.
The final character was two-fold. The first part manifests as a large rolled Persian rug that wiggles about. The second is a man, who struggles free of the carpet, discarding it. This gangland cliché is immediately understood and provided the most effective way found of repeating the action in the opening shot of the film, with a different meaning.

Sound

The importance of sound to film and animation never ceases to impress me. Even a simple background ambience or musical theme helps draw the viewer into the world being communicated by the artist. Often, however, sound is a much more critical element and can be central to communicating a sense of environment, space, mood, tension and flow to a film. The same film can seem flat or hollow without it. Sound would be especially critical to my animation because it would be used to help define the differences between separate environments and also as a support for the somber mood created with the piece.

Using the storyboard, a list of every sound effect necessary for each shot was made. Because of the different environments and seasons, the number of sounds was found to be pretty overwhelming. In the interest of time, as many sound effects as were possible were gleaned from the school’s collection. Surprisingly, many of the sounds of natural ambience were palatable. A good supply of mechanical noises and some water sounds, which were later altered digitally, were also found. Though, in general, pre-recorded sound effects were avoided, the ones selected from the collection were fairly pleasing. The remaining sound effects were recorded by making noises in and around my house, as well as by recording the muffled and unclear vocalizations of colleagues.
Having all the basic sound effects in hand, there was still one part of the film’s sound missing. A deep, somewhat melancholy sound was needed for the world beneath the surface. Where to find it was unknown. I am not a musician, nor had I ever worked with one. Thankfully, Johnny Robinson put me in contact with a musician, Janeen Ceparano, a violist. After hearing her play, it was clear that her instrument had the potential of producing the dusky sound that was wanted for the underworld theme. When given a rough-cut of the animation, she came up with a theme that helped tie the underworld together and added a dramatic element to the work.

The Process of Making

The way in which the film was made was entirely cumulative, and the working pace was dictated by a series of trial and error experiments. Initially, a number of elements were generated. At this point, doing a shot by shot construction wasn’t the primary concern because elements from one scene could be used in others as well. This was especially true of 3D parts that could be easily re-configured for different shots. An attempt was made to tackle the most difficult tasks first, the belief being that once they were completed the rest would fall into place. The 3D components were the first to be started on, assuming that they would take longer for me to create than the 2D ones. Instead of modeling characters first, set pieces were made because they would be more detailed and labor-intensive to create.

I had thought that all of the underwater scenes were going to be similar in appearance and would require making only a handful of items that could be re-used scene to scene, which turned out to be largely the case. The intention then was to build the 3D portions for all of the aboveground shots because they were varied in appearance and complexity and would probably take the longest time to make. For
the above ground scenes, three distinct environments were created: crannog (antiquity), manor house (age of reason) and service station (contemporary material culture).

The crannog was built first using Alias|Wavefront’s Maya and textures were made for it in PhotoShop. The artificial island that it would stand on was also built, and a rudimentary attempt was made at creating 3D water to surround it.

Originally, I had thought that the crannog would appear in the shot closer than it does, so the model and textures are unnecessarily complex. A range of ambers, browns and faded yellows were chosen for the textures so it would match the autumnal scene it would appear in. The island itself is supposed to be made of peat and what became probably the single most prevalent texture in the film was developed for it.

For visual reference I had taken some detail photographs in a salt marsh, and among them was one of peat moss that was scanned and brought into PhotoShop. By using various PhotoShop tools and a little creative blending, a texture was made from it that tiled relatively seamlessly when applied to the surface of a 3D object. It ended up being the only texture created from a photograph, but it blended with the others when put side by side with them.

The last 3D element needed for this shot was the grasses. A blade of marsh grass and a cattail was built using rather simple forms with light geometry because a lot would be needed to fill the space in a shot. For the background grasses, a polygon plane was used with an image of a row of grasses mapped on its surface. A transparency map was then applied to it so that only the grasses would show. The edges of the plane were then animated to slant back and forth and multiples of such planes were layered for depth. The result was a fairly convincing way of making extremely light, fast rendering animated 3D grasses for the background. The grass
textures for the crannog shot were also a faded yellow with an earthy umber for the cattail.

The manor house was to be in the distance so it was built from a fairly simple polygonal form, its textures being kept relatively simple as well. The rest of the environment was to be 2D except the grasses in the foreground. The same grass and cattail design built for the “crannog” shot were used, but they were given springtime hues of green.

The service station in the storyboard was of a fairly non-specific architectural design, and I wanted to build something more specific to my background and interests. I came across an old photograph circa 1945 of my mother as a little girl standing in front of the filling station that used to be on my grandmother’s property. The filling station was built in Maya, but made to look dilapidated and abandoned. The textures are based on the filling station in the photograph with hues derived from the black and white image as approximations, but care was taken to make the paint appear cracked and peeling and the other surfaces to look corroded and neglected. The runned-down look of the place was added to by making the soot-covered panes broken, adding boards over the windows and littering the lot with debris. The pavement couldn’t be made until the exact 3D camera placement was known because crumbling asphalt had to be modeled at the exact edge where the water met the land.

After the 3D components for the sets in all the aboveground scenes were made, the various 3D characters and objects needed to flesh the film out were begun. Research was done to find images to use as visual resources. It was important to have very specific texture placement on the fish, pollywogs and the body. My fellow students, in the hopes that it might prove to be a valuable tool in achieving this, showed me the basics of Alias|Wavefront’s Studio Paint, a 3D paint program. The pollywog was begun first because it would be the simplest form on
which to learn. The modeling of the pollywog was based on images downloaded of various species of tadpole. The pollywog was textured by mapping files I painted in PhotoShop onto it, then painting directly on the object’s surface in Studio Paint. This worked, so the technique was also utilized for the fish and to the body.

The body proved to be the most time-consuming model created for the film, as it was the first realistic human form I ever built using 3D software. From the neck down, the body was modeled out of subdivision surfaces, a form of 3D geometry I had not until then worked with. Subdivision surfaces were chosen because they combine the ease of use inherent to polygons with the rounded forms of NURBS. The head and neck are made completely out of NURBS because they were modeled first, before I had experimented with the newer geometry type. The body was inspired by images of several bog mummies exhumed from the peat bogs of Northern Europe, as well as by images Skip Battaglia brought to my attention of the mummified remains of 19th century Mexican mine laborers. My own facial and bodily proportions were used because I was the most readily available model and also because of a desire to figuratively leave a piece of myself in the marsh.

The body is one of two objects in the film that take on a blackened and corroded appearance as they become impacted within layers of peat and preserved by the natural tannins and chemicals in the bog. In order to make this transition, two separate groups of textures had to be made: a “before” and “after” set. The initial textures were created using PhotoShop and Studio Paint in conjunction with one another. These were the “before” set, that is, they were meant to depict unspoiled fabric and the organic tissues of the freshly post-mortem. These same textures were then taken into PhotoShop and used them as templates to make the corroded or “after” versions, so that the texture coordinates would all match exactly. The process of making “before” and “after” textures would later have to be repeated for the painting, which would corrode in a way similar to the body.
The monster was modeled completely out of subdivision surfaces, but the design was much simpler than that of the body. The creature’s textures are largely those of the environment around it, in order for it to look naturally camouflaged.

The remaining 3D objects and characters for the film were modeled using a combination of all three geometry types and using all hand-drawn, hand-colored textures from PhotoShop. After modeling the primary 3D components, a shot by shot execution of the film began.

The aboveground shots were to be done first as they would require the greatest number of layers to composite and would probably be the most complex to execute. The handling of the appearance of water still hadn’t been worked out, which unnerved me because of its central importance. The shot containing the thief and manor house was begun first because it was the least complicated of the aboveground shots and I thought that if the kinks could be worked out of it, what was learned could be applied to the more complicated two remaining aboveground shots.

A 2D background was fashioned for the shot first in order to provide a ground and orient the composition. The movement of a 2D thief was pencil-tested over the 2D background until it looked successful, and then a finished black-line version of the thief’s motion was done. This animation was scanned and brought into Maya as a tiff sequence. The motion of the 3D pearl necklace, teapot and painting were synched up with the 2D thief.

I experimented with 3D water and was disappointed by my inability to make it look at all natural. Though the prospect of creating 2D water throughout the film was intimidating, I decided to just try 2D water to interact with the thief and the objects he drops. Looking at actual bogs in the Rochester area proved to be helpful. The way in which the surface could look calm and glassy, despite the gentle motion of the grasses in and around the water, was inspiring. In Maya the orientation of a
simple plane was matched with the theoretical perspective of 2D water. A “use background” shader was then applied to the plane. This made it so that any object that passed through the plane would disappear on the other side. It would look as though they were being submerged. A 2D sky with moving clouds was used as the base layer in After Effects, the 3D manor house was put on top of that, the 2D background layer was put above that and a blue green patch of 2D water was placed below. After coloring the frames of the thief animation in PhotoShop, it was imported with the rendered sequences of the 3D objects the thief drops. Reflections were created by making duplicates of the sequences, flipping them upside-down, blurring them and reducing their opacity. Every object that then moves across the scene was also mirrored in this same way to create the illusion of a reflection on water. When the 3D objects fall into the blue green area, 2D splashes were added to augment the effect. The 2D water looked adequate so this procedure was applied to the other aboveground shots.

After the “thief” shot was complete, the “crannog” shot, the opening shot of the film, was made. More or less the same approach was used for the “crannog” shot as was used for the “thief” shot except that a way of making mist had to be developed. The shot was to begin as a white field that dissipates into a misty scene. Several PhotoShop files of mist of varying transparency and composition were made. By animating them to move at different speeds in different directions while also animating their opacity to fade in and out of visibility, the right look was achieved. The stork, pallbearers, druid and flutist were created in exactly the same way as the thief. The splashes and reflections were created using the 2D water technique developed for the “thief” shot. The movement of the 3D body was matched with that of the pallbearers in the same way the thief’s objects were matched with his movement in the “thief” shot.
The shot featuring the service station proved to be the most complicated of the three to make. According to my storyboard, both the “thief” shot and the “service station” shot were to begin with a camera move starting below the surface of the water and ending above it. The “thief” shot was created without the camera move, and the move was treated as a separate shot to be tacked-on at a later time. This wasn’t a problem because the “thief” shot is primarily 2D and the corresponding camera move was completely 3D. Compositing them together after the fact wouldn’t be a problem. The opening camera move was more integral to the “service station” shot because the entire foreground was to be 3D. There was no way to make the “service station” shot and tack-on the camera move later. Because the shot was to begin under water, the “service station” shot was abandoned until the look of underwater scenes in the film was resolved.

The majority of the film takes place either underwater or underground and the way these environments would appear had yet to be determined. A more or less chronological approach came into practice at this point, since I’d gone as far as I could with the aboveground shots. The shots where the body sinks below the surface, then drops down and settles on the bottom where it is investigated by fish, were foremost on the list.

The brief shot of the body bobbing on the surface and then sinking out of sight was accomplished using elements borrowed from the “crannog” shot. It tied the primarily 2D look of the “crannog” shot to the three dimensional look of the shot where the body drops down to the bottom.

The set for the “drop down” shot was built next. It consisted of a lumpy NURBS surface with the peat texture applied, which was then covered in rocks, grass and sunken logs. The body was animated to slowly sink down and settle, and then the fish were animated to investigate. It became clear during the storyboarding phase that moments of darkness would be used to emulate the camera’s passage
through peat. These moments of darkness would serve to separate the shots, so when one of the fish swims away from the body, the camera follows until it is obscured by peat. The next task was to make the shot look like it was under water.

Childhood memory served as my guide. Thinking back to the many times I spent submerged in the channels snaking through Yarmouth Creek, the three things that stuck out most in my mind were the greenish murk enveloping distant objects, floating clouds of detritus and wavering striations of sunlight playing across the surface of objects close enough to see. A series of experiments were embarked upon to make these things possible.

Never having used 3D fog before, it could nevertheless be surmised from examples seen elsewhere to hold some promise of making the desired green murk. Using 3D fog and through trial and error, the murk and hue I had in memory were approximated. The light striations were accomplished by applying an animated texture map to a spotlight, then tweaking the timing and randomness of it until it looked passable. Finally, the floating detritus was made by compositing 2D files painted in PhotoShop over the 3D segment and animating them the same way the mist in the “crannog” shot was animated.

The “drop down” scene was a real milestone. Every other underwater shot thereafter was accomplished by applying what was learned through making this shot. The shot containing the fish-eating creature is treated in much the same way as the “drop down” shot. In addition, for some underwater shots, 2D compositing tricks learned from the “thief” shot were drawn upon and 2D parts were adorned with the same textures as adjacent 3D parts.

The next major challenge was the shot in which the body becomes mummified while layers of peat build up over it. The body was animated so that it appeared to be crushed down, and the visibility of objects was animated to make the peat layers appear. Animated texture maps were applied to every surface in the
shot so that they became darkened and earthen. This was done by taking the mummy's "before" and "after" textures into After Effects and making the "before" fade into the "after". The resulting animation was then exported as a tiff sequence for the animated texture map in Maya. The same thing was done for every other object in the shot as well. The bump maps on the mummy were also deepened over time so that cracks and deep ruts would seem to appear in its tissues and textiles.

With the look of the underwater scenes figured out, making the opening camera move belonging to the "thief" shot became possible. A shallow underwater scene that is brighter and sunnier looking than the "drop down" shot was built. The surface of the water above was a plane that had a 2D animated texture map on it to make it look like slightly moving water. The same 3D grass file used in the "thief" shot foreground was used here so that when the camera moves up through the surface and stops, the grasses of the two segments match. Some more 2D effects were also thrown in to make the breaking of the surface more convincing.

After the camera move at the beginning of the "thief" shot was completed and the two shots were linked together, I realized I had figured out how to handle the 2D/3D above world/below world issues for the rest of the film. Shots were executed more quickly. The shot in which the painting sinks down took a fraction of the time the "drop down" shot took, as the techniques I needed for it had already been developed. The corroding and pressing of the painting was accomplished more quickly than the mummification of the body. Finally, the "service station" shot was returned to and the opening was handled in the same way as the camera move that opens the "thief" shot.

The action unfolds at eye level in the "service station" shot, so it was first necessary to decide exactly where the camera would be placed during the main action sequence, then figure out where it would be at the beginning. Then the camera move from one to the other was animated. An underwater scene that
incorporated crumbled chunks of asphalt mixed with eroded gravel foundation was built next and given bluish night-time lighting. The same system developed for the "thief" scene camera move was used here to get the point of view in place.

In the storyboard, a 1940's style car rolls into the scene along the waterline, and two gangsters get out and heave a wrapped form or sack into the water. After discussing creative possibilities with my committee, we found a less difficult way to illustrate the same thing, while keeping it conceptually potent. Marla Schewpepe suggested cutting the two gangsters from view altogether, and Johnny Robinson suggested the classic gangland motif of a victim rolled in a carpet instead of the sack idea. I thought the suggestion of off-screen gangsters would not only be technically easier, but more engaging to the imagination of the viewer. Much of the action would be communicated by sound. A rolled carpet is more quickly identified and understood than a shapeless sack. The shot had more tension in the end than it would have had if there had been no departure from the storyboard. A 2D city background was added to the shot in After Effects and the water level was animated in Maya to go up and down, signifying that something was dropped in, which, when accompanied by a splashing sound, seemed to work.

The final two shots were another departure from the storyboard. Originally, the wrapped form gets dunked into the water, and sinks. I was never happy with this ending, and wasn’t sure what viewers would get from it. The action in the last segment of the film was supposed to mirror that of the first with a difference in content that would illustrate a change in human values. Instead of just having the body sink, a wriggling person would escape the carpet he was rolled in and swim away, somehow leaving a piece of himself behind. I chose to have him kick his shoe off because of its metaphorical connection to the idea of a footprint. The escaping figure was made 2D so that the style of form and movement would match that of the
thief and the other living humans in the film. The decision was acceptable to me and my committee responded to it favorably.

Another addition was to have the camera begin a third 360-degree cycle, then quickly fade to black. This suggests a continuation of the whole process described in the film. The way in which the film would end was one of my most gnawing concerns during the project, and I was exceedingly relieved to have it satisfactorily resolved.

**Conclusion**

The process of adapting a written work into a visual and auditory piece was a useful way for me to come up with the concept for this project. Drawing from the writing, my intention was for this film to convey a solemn tone as well as require the viewer to think about its meaning on multiple levels.

The film is a depiction of an environment and how, as the surrounding human society evolves and changes over time, the relationship between this environment and society changes. In the beginning of the film, the marsh is a both a home and a place from which people obtain their livelihood. It is a hallowed place where the dead can be returned to nature. As the movie continues, one becomes acutely aware that the marsh is valued increasingly less by people. In the thief scene, the marsh has become a place that is relegated to the outskirts of society. By the end of the film, the viewer is aware that the marsh is completely irrelevant to humanity and has become a place of desolation and a dumping ground. Though man comes to completely devalue the marsh, unbeknownst to him the marsh has been keeping a secret history of mankind within it.

The project provided a good way for me to communicate my views through a visual medium. Writing in the stream of consciousness helps me to tap into thoughts that linger at the periphery my supraliminal mind. This periphery borders the
subconscious, and I find that the ideas I draw from it are usually the most poignant and least trite. Because of this, I plan to continue using my writing as a source of inspiration for my animation.
Appendix A

Thesis Proposal
PROPOSAL FOR AN MFA THESIS PROJECT

The Marsh
by
Joshua Reed Gramse

MFA Imaging Arts / Computer Animation
School of Film and Animation
Rochester Institute of Technology
April 10, 2000

______________________________
Skip Battaglia
Professor
School of Film and Animation

______________________________
Marla Schwepppe
Associate Professor
School of Film and Animation

______________________________
Johnny Robinson
Visiting Assistant Professor
School of Film and Animation
The Marsh

Scene opens on a misty marsh. We see a crannog, a hut-like structure on an artificial island. A small, shadowy group of people stands on the edge of the island and gently lowers a wrapped body into the marsh amid the sounds of lamentation, reed pipes and a drum. The camera follows the body below the surface as it sinks into the marsh. When the body settles, the camera begins a slow 360-degree turn through the peat.

As the camera rotates, it passes other objects embedded in the marsh. Amid squirming marsh life, we see broken pottery, moldering gloves and boots, chainmail and the remains of a horse and rider. When the camera completes its 360-degree rotation, we see the body again, now compressed and darkened, and the camera moves up to show that the crannog is now sunken into the marsh above the body. The camera moves up through the layer of muck to the surface again.

A manor house can be seen in the distance beyond where the crannog once stood. We hear dogs barking and shouts, a pair of running legs obscures the view and valuables fall into the marsh. A gloved hand reaches back to pull a pearl necklace from the ooze, but silver objects and a small oil painting sink into the marsh. The camera follows the objects; the silver disappears from view. The painting settles above the crannog’s layer. The camera begins its slow rotation beneath the marsh again.

As we pass by we see that a bed frame is layered on top of the broken pottery, books and corsets are layered above the corroding chainmail, a lantern and part of a chain link fence above the horse and rider, we see hubcaps and broken horn-rimmed glasses. When we reach the body again, we see it is flattened, mummified. The crannog is grown through with roots and is compacted. The painting is blackened, its frame deteriorated. As the camera moves up again, we see gravel has been layered above, then cement.

When we break the surface we see an abandoned petrol station, the marsh encroaching on it. In the distance the peaks of houses can be seen, and a city beyond that. The edge of the petrol station parking lot is eroding and falling into the marsh at the camera’s eye level. A car tire pulls into the foreground. Doors are heard opening, the trunk is popped. A wrapped form is coarsely pulled from the trunk, dragged to the edge of the marsh and dropped hastily in. As the car screeches away, the camera follows the wrapped form down, down. Fade to black.
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Begin storyboard  
Begin research |
| May 2000         | Finish storyboard  
Begin preliminary modeling  
Maya Tutorials  
Visual research continued |
| June 2000        | 3D background modeling  
Experiments: 2D elements and 3D elements  
Finish modeling crannog and begin gas station |
| July 2000        | Pencil test of people throwing in first body, its decent  
Texture maps  
Lighting tests |
| August 2000      | Pencil tests of thief dropping items  
3D modeling  
2D animation  
Lighting nearly complete |
| September 2000   | Pencil tests of final shot, body going down  
Test compositing  
3D and 2D sync |
| October 2000     | Pencil tests and  
Inking and coloring 2D  
3D and 2D sync |
| November 2000    | Pencil tests and alterations  
Inking and coloring 2D  
3D and 2D motion and sync  
Test compositing 2D and 3D  
Rendering |
| December 2000    | Finish pencil testing  
2D and 3D sync  
Inking and coloring 2D  
Rendering  
Test compositing 2D and 3D |
| January 2001     | Inking and coloring 2D  
Rendering  
Compositing 2D and 3D  
Begin sound research |
| February 2001    | Inking and coloring 2D  
Rendering  
Compositing 2D and 3D  
Sound composition |
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- Rendering  
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- Final sound sync/sound composition  
- Feedback, revisions and additions |
| **April 2001** | - Revisions and additions  
- Post production  
- Marketing |
| **May 2001** | - Final Revisions  
- Final project  
- Screening  
- Marketing  
- Thesis paper  
- Final approval |
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Irish crannog settlement, circa A.D. 500. Ireland is dotted with the remains of settlement sites that range from prehistoric times to the Middle Ages. The settlement depicted here, from western County Clare, is a reconstruction of a crannog, an artificial island built in a shallow lake, possibly as a means of defense. Crannogs, which originated in Scotland around the time of Christ, began to appear in Ireland in the sixth or seventh century A.D.
Appendix B

Original Storyboard
Appendix D

Original Poem
The Marsh

I think the marsh sleeps, but with one eye open and a mouth that curls strangely. A snoring chorus of insect things accompanies this melancholy slumber. Dozing really, activity may rouse it into stifling all and making silence renewed. Jealous of drier climes, the bog will drink the high ground when it can; gurgling swallows echo in its bubbling stomach. Straining the ear, one can hear muffled tales of cold, unblinking ancientness creaked out by the corroded mail-links worn by those who sleep under the peat. The bog-stench speaks of low tide, alligator-backed but no tropical mangrove nor lively Amazonian lagoon. Youth, like dryness, is a concept unknown within the bowels of the slough. No crocodiles but rather afancs here, things of the bitter North that swish in murk. Noses cold, legs itching from sweat, lone travelers move warily through reed and rut, stagnant pool and loon-nest. The burning light of home is always too far off. Mislead by foxfire, an unholy hoax, the marsh becomes a laughing web. An eternity of lonesome souls have had their footprints stamped in and then erased by the ooze.

An enormous stone wheel grinds slowly, turned only by wounded eddies, a current spilling from the last breaths of dying hatchlings. Travelers become transfixed by the still pools. Their circadian rhythms get sticky, gummed up. Something clicks slowly, deep. A deliberate and methodical rhythm like clockwork, its springs festering with squirming swamp-things. Too deep for the ear, the clicking is heard by the teeth, the bottom of the skull, the innards catch it and move in time. Looking beyond with eyes of purest fog, ink is the water that laps childlike at your edges. Cold fell, phosphorescent spectres exhaling smoky coils of mist into the thorn-bush hair of a quietly moaning nymph. Soaked to the bone, the reeds whisper at sullen waterfowl. Some birds stay too long in the marsh; they stop moving and sprout with angry grasses.
There is a stone in the marsh that shrieks due to its proximity to that which is buried beneath it. Hunters have been rent asunder and become food for the tiny things when straying too close. The springs of Gehenna reach to our world’s surface in the marsh, many nooks of hell are housed by it. With hair of snow and eyes wild some return to the hearth after mere hours lost in the fen. Secrets, mysteries that ruin the pink mind, making it grey and sodden, encrusted with broken mollusk shells and putrescence; these things a stumbling lamb may receive. The morass belches St. Elmo’s fire, the blinking eye of many a sulphurous peat-fleshed troll, moss-furred and hungry. Toothless, they suck victims to a dark and pungent place.

Having crawled out of the peat, hairless and sun-sensitive; so too does one go to the peat. Despite repeated bathing in the new, moss grows in neglected fissures, the “night-parts”, sun-shy areas of consciousness that gibber with thick black tongues behind soap-fragrant ears, still squirm in the marsh. Worms raise young in one’s belly, they murmur in sleepy tones, soothing the shock of decomposition. Parasites become beloved children.

Frustrated, soul-less and sexless, the marsh has no lover but is always pregnant. It births the putrid by parthenogenesis. It sees the things that live in its skin as progeny. It grins at the things breeding in its pools, longing to nurture and strangle them. Swimming in itself, it tries its hand at mothering but its sympathy is acidic; corrosion is its very breath. It cares wickedly. Having no true children the bog is always longing. It desires outside life, it is a thing of snares and traps. It cannot hide its true face completely, but will try. With a gurgling voice of mock-sweetness it bids the traveler, “Lie in me child, weary you must be. Motion is tiresome. A thing-of-forever in me you shall become. Though it seems to choke, the mist shall preserve you. Lie down child, lie down...”
It lies about its lack of movement. It moves *inside.*
Deep under it all there is a space where the roots, the rot and the wet give way to the *deep orb.*
It rotates way down and keeps the humming click synchronized with the mosquito’s incessant buzzing.
It is a perpetual motion machine powered on quicksand suction and the chemical fermentation of dead matter.
Whole histories are down there, lost pack animals and men.
Small bubbles hint at things nibbling underneath, forgotten days when with a belly full of blackberries and millet the shaven adulteress was cast down from her lynch-spot, swallowed by greedy muck she roared at her role beneath a dim sun.
She’s still down there and is kept company by cruel wishes and millions of teeth gnashing in unison.
This is the engine of the quagmire.
The effects of Life Space Crisis Intervention training on levels of teacher stress and time-out room referrals.

Graduate Thesis
Submitted to the Faculty
Of the School Psychology Program
College of Liberal Arts
ROCHESTER INSTITUTE OF TECHNOLOGY

By
Michele Helfand

In Partial Fulfillment of the Requirements
For the Degree of Master of Science and Advanced Graduate Certificate

Rochester, New York May 15, 2002

Approved:  

(Please provide signatures for the committee chair and committee member)

Dean: