

Kenneth Hill – P060243

BA 3D Computer Animation – Year 3 (2018)

M6X01580 - Critical Review

Self-reflective Report

Year One

AV Production

Noir short

This was not a true assignment, but the experience contributed significantly to the later short film assignment.

A short film was required to be shot using noir lighting. Our group decided to shoot a film with a noir detective style story. It was shot in black and white using a DSLR camera, in a group members residence.



Short Film – Subject: Late Submission

The assignment was to shoot a short film, edit it and provide foley (sound) work for it – based on the loose concept of an excuse for a late assignment submission. Our group shot the film in black and white using a DSLR camera, telling story about a virus taking over a student, making them late for a hand in. Both the shoot and the foley work were done in a group members residence, which increased freedom to work, but also decreased availability of

resources (such as multiple lights, and a greater possible selection of camera lenses). Doing foley in this environment also meant a less controllable sound environment compared to a soundproofed studio in the University.



Use of depth of field technique and different lenses to achieve different looks between shots. Some shots reference Nosferatu (shadows on the walls), and others reference The Matrix (student sitting in front of computer screen).

Overall I was happy with the end product, but camera work suffered from a loose focus in shots such as the one above. If any future video shoots were required, I would be inclined to test each shot on a computer screen after filming, as video previews on the small DSLR displays are unreliable for this purpose.

Production Practise

#1 Literary Review - Save 2D / Travelling Turtle Towns

This was a group project to create a static image computer graphics render as a poster that represented some sort of fictional subject matter or media property.

Within our group, we decided to base our project on Ghibli animations, originally with the focus on Howls Moving Castle, although over time the moving castle became a walking turtle with a small group of buildings on its back. The background and 2 side character models were produced by myself, with the remaining work of the turtle produced by other members of the

team. The background was created in Terragen, and the models produced in Maya.



Using Terragen for the background environment was a decision made by myself to reduce time to create it, however using it made it almost impossible to load the background into Maya, so it was necessary to learn how to import and manipulate non-terrain models in Terragen in order to achieve the best result for the final image. In retrospect, I would have created a simpler background so that the work environment could have been kept common to Maya throughout the group and project work.

PROJECT #2 - Low Poly Cinematic

Subject matter and artefact for the assignment were left to group decision. The group decided on a cinematic for a game, created in a low polygon art style. Several tests were made to determine the optimum look for low polygon environment, with hard edge normal being used to augment the highly faceted appearance of the low detail geometry of the terrain and props.

Communication was loosely maintained within module lecture hours, and not outside. This led to a group wide disconnect, and an overall less pleasing submission than the early tests suggested was possible. Future work requires close communication with the whole group to achieve a cohesive final submission.



Modelling Lighting Rendering

#1 Environment – Interior

Environment modelled for interior design, based on the Tyrell office scene from Blade Runner. Scene modelled in Maya and textured in Mudbox.

Greatest care was taken in modelling the pillars, and in setting up the lighting and shaders for the scene.

Texturing was left until much closer to the deadline, and at a point when I was far less familiar with UVs and texturing techniques - leaving the result somewhat less satisfactory than intended. In future UVing and texturing should be taken into account during the modelling phase of any project to decrease risk of building up a workload that I am unfamiliar with that could significantly impact the quality of the final work.



Insufficient research was carried out to make a more believable interior shot that appears as if someone had actually been in the shot, leaving it looking somewhat sterile and static. Future work should apply significant research into both the scene that was directly referenced for the work, and any other related work. Also, basic research on prop appearance and construction will benefit any future work, for example, the table in this scene appears to be created from a single piece of continuous wood, whereas in reality a wood

table must be constructed from several pieces of wood, both to achieve strength and to achieve desired shape in larger examples. While it may be possible in the future to create such a table from a single piece, it would be less believable to the modern observer and stand out in a negative fashion, breaking the illusion of a separate possible reality that the shot is trying to portray.

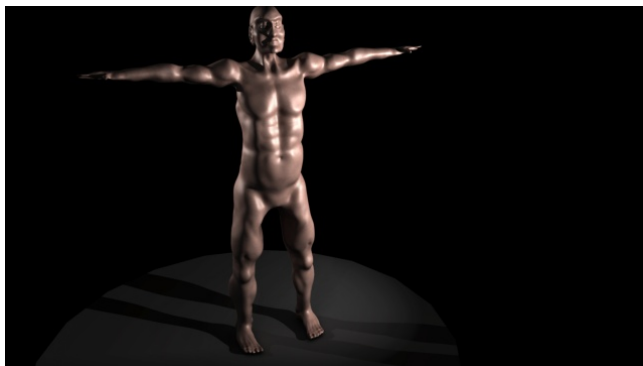
#2 Characters - Sculpt

The goal of this assignment was to sculpt a character in ZBrush, and then light and render it in Maya.

I used anatomical human male references to create the sculpt, however I only familiarised myself with the necessary tools to properly join a hand to the main body near the completion date, so this part of the sculpt was probably the least detailed.

An attempt was made to paint the sculpt in ZBrush, but I did not sufficiently invest time in learning techniques that apply specifically to ZBrush, leaving the final texture somewhat low resolution, almost to the point of being indistinguishable from a basic shader material.

The mesh was then illuminated with 3 point lighting, and rendered using Mental Ray in Maya. Again, lighting was done last minute and rushed to meet completion time, with better time management, I could have done more elaborate lighting, and properly posed the sculpt mesh in Maya.



Visual Studies

#1 The Amazing World Of.... - Pre Production

A number of pre production materials were necessary for this assignment, including a layout, storyboard thumbnails, full storyboards and a character sheet.

#2 The Amazing World Of... - Animation

The assignment was to take a shot of the previous assignment storyboard and animate it in Maya.

Animation was neglected to concentrate on the environment, resulting in a low quality of animation in the final submission.

Adequate time management could have improved the animation of the submission.



Computer Animation

#1 Little Creature Studies

Animation of a Komodo Dragon walk cycle, modelled, animated and rendered in Maya.

Animation reference was taken from Komodo Dragon wildlife videos on Youtube.



#2 Cyberdyne Systems Mutations

This assignment was to create an animation representing a cyborg or robotic individual, which could either use more fluid/smooth binding animation that would be more suited to a cyborg / android, or a more rigid binding animation suited to a classic mechanical robot.

History of Animation

Essay

The assignment required an essay covering the subject area that related to animation and computer graphics.

The essay concentrated on the stories of the initial founding members of Pixar studios.

Information was mostly taken from websites, which were only loosely referenced after the fact of writing.

For future written work, greater attention should be taken to reference sources as they are used to avoid confusion when finishing later.

Year Two

VFX

#1 Lucid Dream

This assignment required me to familiarise myself with the compositing program NUKE and the animation program MotionBuilder.

During this assignment I learned how to track elements of video in NUKE, which I used to composite in video clips in place of windows at the back of the shot in the video.

I also used camera tracking to create a point cloud, which could be used within Maya to create a sort of false 'blocking' environment that matches the static objects in the shot.

Once I had learned how to use MotionBuilder to assign motion capture data (not created by myself, but downloaded from a free web site for the purpose of the assignment) to a provided digital actor model which I rigged and weight painted for the task, the animated digital actor was imported into the false environment corresponding to the live plate.

By then using the blocking objects as a sort of visual passthrough to the static objects in the live plate, these objects appear to obscure the digital actor in a manner desirable to a visual effects composite.

The final result was less visible when composited onto the live plate than I intended, due in part to a rushed shader creation for the animation – however it did have the benefit of masking the strange animation caused by mixing the motion capture data with my own bad weight painting, some investment in weight painting practise should be made to reduce these problems in the future.



#2 Internal Bleeding – 3 VFX Sequences

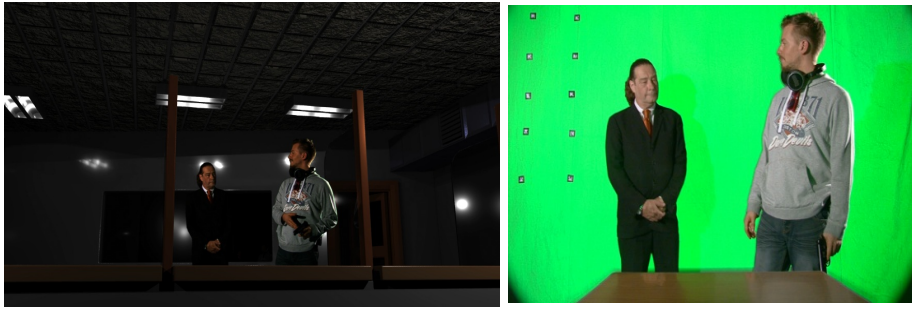
This assignment required me to take live plate video shot on green screen inside a shooting gallery, and remove that green screen, while providing a suitable computer generated background to replace it.

First, I needed to learn how to effectively remove the green screen on all the shots, which was in itself difficult as standard techniques would remove (or rather make transparent) elements of the actors and props that received green bounce light from the green screen.

In order to do this, I first applied methods to remove the green screen, and then went back in certain shots and used the rotoscoping tool in NUKE to remove certain small elements, and by adding these roto objects together with the larger scale removal, I was able to get a mostly clean live plate for background addition.

Next I created a CG background in Maya, influenced strongly by gun ranges in several action films that I referenced for the work.

Greater attention was made to the green screen removal than the background creation, and therefore the final background suffered from more basic shaders and procedural texturing, again time management would significantly benefit overall submission quality.



Creative Practise

1st Semester - Adar

The assignment had a broad remit for a group led project, with our own group deciding to create a short film animation.

My own concentration for the project was on the background environment modelling, aswell as the lighting and rendering of it.

Early on in production, a more recent version of Maya was used in the hope of it being available at render time, as this was more conducive to artistic choices for rendering, however lacking access required the shader and render setup to be re done late in schedule to use an older version with a different renderer.

Also, scale differences between the animation model and the environment required a rework of the environment lighting, and some minor changes to placement very late in schedule, in order to meet render deadlines.

Adherence to a common scale was realised to be a necessity for future group projects.

Early attention was made to render times per frame while creating the environment, but no time was taken to investigate render infrastructure, which later resulted in wasted render time when renders left overnight were rendered to the same user account on the University network.

This also led to later confusion - as zero remaining space on the network made it impossible for Maya to create render logs, which it will not render without.

Future investment in infrastructure readiness is necessary for successful adherence to a render schedule, which is vital as this point is often close to assignment deadline.



#2 The Short (Live Action) Film Project

The assignment was to take a shot from the World War 2 short film - Jump School provided for the assignment, and to create a visual effects CG shot and composite to cover one of several shots in the short film requiring visual effects to elevate its effectiveness.

A shot requiring a grenade blast was chosen, and a Bifrost simulation was created in Maya to match the prop use and timing.

During compositing, a further layer of effect was added in NUKE, to simulate a sudden camera shake to be caused by the grenade shockwave, aswell as a red hazing in the aftermath of the explosion.

However, during feedback, I came to realise that the effect of the simulation was not in keeping with reference material for grenade blasts. While the animation served to progress my knowledge of Bifrost and NUKE, it was too elaborate for an accurate grenade. In future, adherence to reference must be observed to retain maximum suspension of disbelief.

A further improvement could have been made by properly tracking the shot, and creating a blockout to match it, which would also have allowed me to use the blockout geometry as a collision object to further improve the accuracy of the Bifrost simulation. As it was, the shot did not leverage the earlier knowledge gained from the VFX module on tracking, and the composite for the grenade explosion was done entirely by 2D matching, rather than true 3D.



Computer Animation

Emotions

The assignment required a showreel of four short clips that each represented a different emotion shown in them.



Entrepreneurship

Business Plan + Presentation

The assignment was to form a business plan around a business idea, and then to present this idea as a proposal, as if to start-up capital investors.

The idea was a music recording studio with on site expertise in music video creation and visual effects for additional music video impact and advertising flair.

Overall contribution to the group effort was minimal as the greater number of the group were musicians with little use for visual side of idea.

Creative Research

Essay - Postmodernism

The assignment required an essay touching on research as it pertained to Postmodernism (as Postmodernism was chosen for the specific research area).

For the essay, it was attempted to reconcile an old king of animation in Walt Disney, to a new spearhead of animation in John Lasseter who helped to turn Pixar into the animation goliath it became, that also later was brought into the fold of Disney studios to revitalise their older culture and failing practises.

For the most part, the contentions and conclusions presented in the essay came from self-knowledge rather than supported by any common writings which would have supported them.

Research Practises

Video Presentation

The assignment required a video presentation on a research subject.

The presentation attempted to convince the audience of the significance of Artificial Intelligence in the Media and the Modern World.

Research mainly consisted of my own knowledge of artificial intelligence subject matter within science fiction films and from Youtube for uses of AI emerging within the modern world.

Given that a great many Youtube videos are often 'dumbed' down for the average viewer even in a more technical area swuch as AI, they are less likely to create a convincing argument to support my subject line. A greater selection of research matter could have more explicitly explained and supported my contentions within the presentation, while keeping the video as a visual cue for the presentation.



Artificial Intelligence
and its Impact on
Humanity in the
Modern Age