

## **MA 3DCA MISC. TECH. INFORMATION :**

### **A Guide to Common Technical Operations:**

*(26-04-2019)*

#### **Contents:**

|                                                         |   |
|---------------------------------------------------------|---|
| The Importance of the Maya file Structure:              | 2 |
| Backing Up Your Maya Projects:                          | 2 |
| How to Prepare your Animation Sequence Renders:         | 3 |
| Common Screen Resolutions:                              | 4 |
| Packaging your render into a movie using After Effects: | 5 |

## **The Importance of the Maya file Structure:**

When you are animating with Maya, the application requires you to use a specific file structure. Maya depends on lots of different types of files to create your animated sequences and so it needs a set of file system folders where it can find what it needs and where it can place rendered frames. Maya will generate the file structure automatically when you select the “Project Window” from the file menu and click on “New”.

When you create a new project from Maya it generates a new folder which you should name in a meaningful way like “myAnimations”, “DogProject”, “DavidsProject”, “myPlugProject”, etc. This is known as the project folder and make sure that Maya puts this project folder on the file system where you can find it. Maya will then generate a set of sub folders within the project folder which are needed for it to function properly. Imagine that the project folder is like a chest of draws and the sub folders are the draws themselves. Each time you start a new project or new film then you should generate a new project folder (a chest of draws) which contains the sub folders within. In semester 1 of the MA in 3D Computer Animation, you only need to generate two projects, one for your Animation exercises like “MyAnimation” and one for your Production Methods Plug project, like “MyPlug”. Each of these project folders must contain the required sub folders.

Don't forget to tell Maya if you switch to another project, otherwise Maya may not function properly.

### **The Project Sub Folders:**

Each sub folder has a specific use and must not be renamed. The four which are of most interest to you are:-

Scenes (scene files are stored here)

Sound (sound files are stored here)

Sourcelimages (texture maps and images needed for rendering are stored here)

Images (rendered images are deposited by Maya here)

When you “Set project” to the project folder, then Maya can then find the files it needs and knows where to store rendered files.

## **Backing Up Your Maya Projects:**

You will backing up your files at the end of the day or at the end of the module session, onto a USB storage device or to the cloud. It is important that you backup the entire project folder, including all the contents and sub folders.

Ideally, you should have identical copies of you Maya project on three different storage devices, at any one point in time, including the college computer on which you work.

# How to Prepare your Animation Sequence Renders:

Firstly, make sure that your scene file is set to 25 fps.

You can do this going to **Windows > Settings/Preferences > Preferences > Settings > Time = 25 fps.**

If you have already organised a Project (with default subdirectories) then make sure you:-

From within MAYA:

**File > Set Project ...**

From the Set Project Window select your project directory then click on the **"Set"** button.

If you have NOT already organised a Project (with default subdirectories) then:-

From within MAYA:

**File > Project Window**

From the Project window click **"New"**

In Current Project enter the name of your project. Example **"DavidJonesAnimation"**

Set the location by clicking on the browse button and navigate to where you wish the project to reside. If in doubt, navigate to the desktop.

Click on the **"Accept"** button.

From your computer filing system, make sure all your relevant animation scene files moved or reside in your project **"scenes"** directory.

From your computer filing system, make sure all your texture files needed for a render are moved or reside in your project **"sourceimages"** directory.

From within MAYA:

Open the scene file you wish to render.

**File > Open Scene ...**

Open the Render Settings Window.

From the Render Settings window

Set **Render Using** to **"Maya Software"**.

If you have set up your lighting and surface attributes for use with Arnold then you may: -

Set **Render Using** to **"Arnold Renderer"**.

Unless you are very familiar with the Arnold renderer, I recommend the use of Maya Software.

From the Render Settings window **"Common"** tab **File Output** section:-

Set **Image format** to **"Maya IFF (.iff)"**

Set **Frame/Animation Ext:** **"name.#.ext"**

Set **Frame padding** **"4"**

From the Render Settings window **"Common"** tab **Frame Range** section:-

Set **End frame** to your required end frame of your sequence.

From the Render Settings window **"Common"** tab **Image Size** section:-

Set **Presets:** to **"HD 720"**

Close the Render Settings window by clicking on **"Close"**

Save the scene file:-

**File > Save Scene As...**

Select the **"Rendering"** section of MAYA.

Select **Render > Render Sequence**

if you wish, you can select the Render Sequence menu by clicking in the **Render > Render Sequence** box.

This allows you to choose the render camera, layer and other options.

## Common Screen Resolutions:

### Common Screen Resolutions



Henry Lutman 09-01-2017

The MA 3DCA programme usually uses HD 720 but if you have plenty of time to render and plenty of disc space then you can use HD 1080

# Packaging your render into a movie using After Effects:

How to package your Maya rendered sequence into a movie file using After Effects.

## Preferences > Import

From the Preferences window set **Sequence Footage** to 25 frames per second.

## File > Import > File ...

From the window navigate to your rendered frames and choose the first frame of the sequence. Make sure the Sequence checkbox is ticked, then click on **"Open"**.

When the Interpret Window appears click on the **Pre-Multiplied - matted with Color** option.

If you have rendered your image sequence against any BG colour other than black, then you must select the BG colour you did render against so that it appears in the colour box. Click **"OK"**.

From the project area, hover the cursor over the imported sequence and click right.

## Interpret Footage > Main ...

From this window, ensure that **Frame Rate, Assume this frame rate:** is set at 25 frames per second. Click **"OK"**

From the project area, make a composition by left dragging the imported sequence down onto the small film icon at the bottom of the project area. The new composition should appear as a tabbed timeline area at the bottom of the After Effects work area. The pixel size, aspect ratio and duration of the composition is set automatically from your imported rendered sequence.

## Composition > Composition Settings ...

From the Composition Settings window, re-name the **Composition Name** to the name of your movie sequence. Check that all other parameters are correct including the **frames per second**. If you are going to include a title or slate at the beginning of the sequence, then extend the overall time by adding a few seconds to the **Duration**. I normally add 6 seconds which allows for a one second fade from black, a four second hold on my title and a one second fade back to black. Click **"OK"**.

Add a title by left clicking the **"T"** at the top of the After Effects work area, then left click on the screen area to start typing your title. Click left on the sloping arrow when you have finished typing your title and left drag to position the title in the screen area.

Re-arrange the position and durations of the two layers in this composition, so the title appears first before your rendered sequence.

Add a background to your composition by **Layer > New > Solid ...**

From the solid settings window, select a BG colour and click **"OK"**.

Re-order the layers by moving the new BG layer to the back of the composition. Do this by left dragging the layer from the top of the composition window to the bottom.

If you have sound then add it now by importing to the project area, then left drag the imported sound down into composition, below the BG layer.

## Rendering the movie.

When you are happy with your finished composition you can render it into a movie file by adding your composition to the render queue.

Click left in the composition window then **Composition > Add to Render Queue**.

In the render queue area ignore Render Settings: **Best Settings**

Left click on Output Module: **Lossless**

From the Output Module settings window, main options tab select Format: **Quicktime**.

Click left on Format Options button. From the Quicktime Options window choose video Codec **"H.264"** or **"MPEG4 - Video"**. Set Basic video settings Quality to anything between **50%** and **100%**. Click **"OK"**.

If you have included sound, then click left on the **Audio Output** checkbox then click **"OK"**.

In the render queue area click left on Output To: **yourCompName.mov**. From the window, navigate to the folder where you would like your movie to go. A movies folder within your Maya project is the best place.

When you are ready, click left on the **Render** button to the right of the render area and eventually your finished movie will appear on file.

Is there a Technical Operation that you have forgotten or that you don't understand? It could be added to this Guide and be useful to other students. Ask your lecturer if you think something should be added to this guide. This could be one of your legacies to improving the programme.