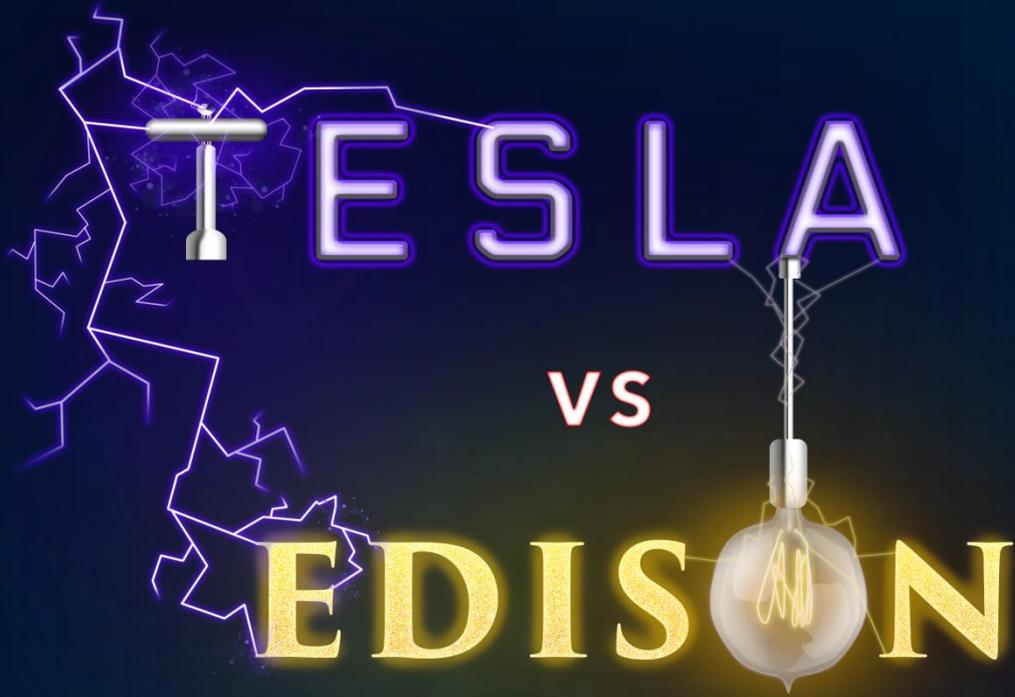


# Visual Style Guide



Thomas Fyfe

Animator

Alex Kinsey

Graphic Designer

Ryan Shearer

3D Artist

# Contents

- 1.** Style Overview
- 2.** Research
  - a. Visual Research
  - b. Concept Art
  - c. Character Development
- 3.** Implementation
- 4.** Guidelines
  - a. 3D Production Process
  - b. Texture Production Process
  - c. Lighting
  - d. 3D Character and Animation Process
- 5.** Asset List
- 6.** Schedule

# Style Overview

## **Aesthetic**

Tesla vs Edison will be conveyed using a 2.5D perspective. The game will feature vivid neon visual effects. Foreground and background elements will be made to pop through the use of a bright, vibrant sky on which they will look silhouetted. Characters and weapon, such as explosions and lightening, will also add light and colour to these layers. The overall style of the game will be cartoony and fun with retro elements.

# Visual Research



Thomas Fyfe

Mood board responding to brief.

Takes inspiration from concept image included in brief and expands on imagery such as contrasting foreground, vibrant colours.

Inspirations include:

- Far Cry 3: Blood Dragon
- Limbo
- Badlands
- Terminator



Mood boards exploring UI layout and UI elements.

Alex Kinsey

Takes inspiration from steam punk, but with a clean modern approach. Possible fonts also listed (retro modern)



Safety  
**Safety Medium**

Zag +1 by Fontfabric  
**Zag Regular**

Teko -4  
**Teko Light**

Rambla +3  
**Rambla Regular**

Electrolize  
**Electrolize Regular**

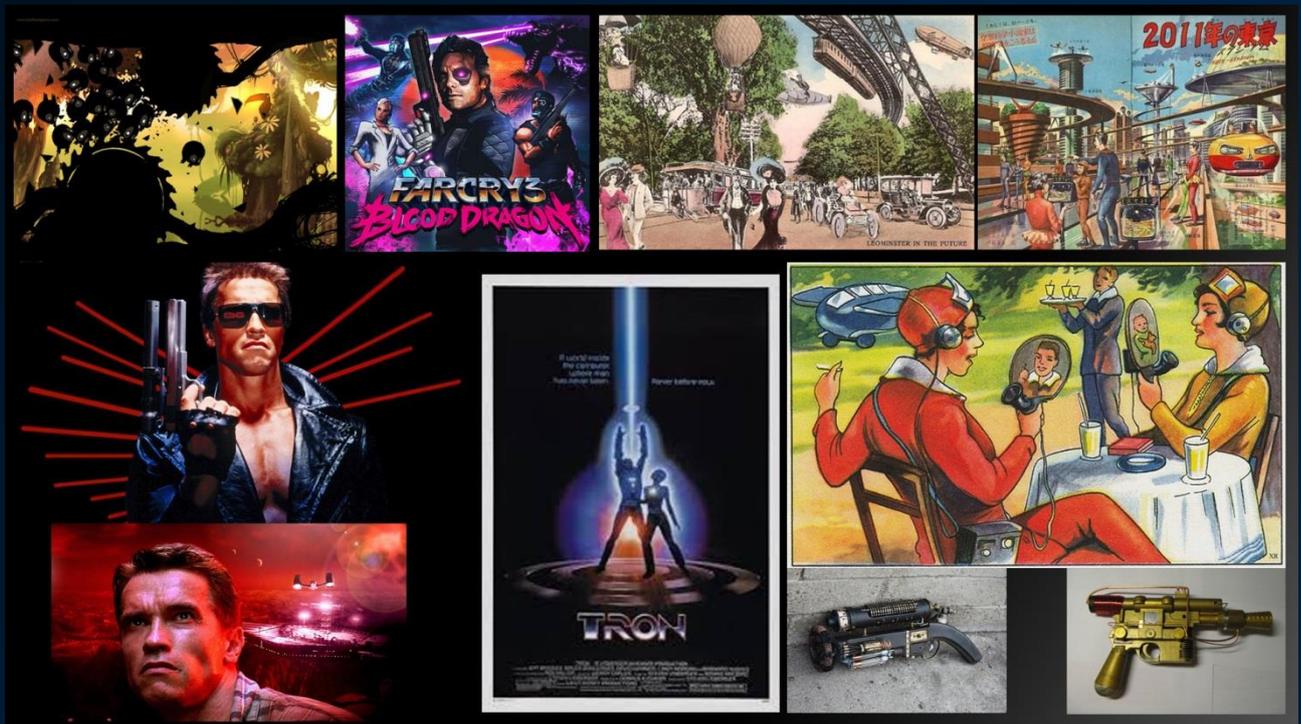
Air Americana  
**AIR AMERICANA REGULAR**



Environment mood board explores island themes. Keeping with the dark dramatic, overarching 'lair' idea, Tesla's island will be home to a wide array of inventions and technology. These include a giant robotic dinosaur with Tesla Rail Cannons dual mounted on its back, a small army of drone robots, and a large destroyer robot to take on Thomas Edison's destructive force of robo-pirates.

As seen below are images of beaches, and islands in real life. Sweeping vistas, long beaches, lush foliage and a variety of rocks and sand are present in all, so these must be part of the 3D assets.





Ryan Shearer

Taking influence from the Terminator and Total Recall (And any other Arnie movie, really (Except Jingle All the Way)), the colour scheme will include a lot of greys, dark blues, blood reds, and everything will have a pseudo-futuristic feel, encased in neon.

The weapons are inspired by weapons from the years of Tesla & Edison. In the late 19<sup>th</sup> century, towards the early 20<sup>th</sup> century, the technological revolution was underway. By 1900, Edison had been granted a patent for the lightbulb, solar power and radar had become real technology, and Tesla was still being mostly ignored. These key moments in time will play a large part in creating a sense of time.



# Concept Art

Game concept. Tests colour palette, characters in game and scale of game.



Thomas Fyfe

Game concept 2, UI layout test. Experimenting with contrasting silhouettes.



Alex Kinsey



Game concept 3 – Tesla's army. Experimenting with colour palette and glowing elements.

Uses more up-to-date character and level ideas.



Game concept 3 – Edison's army. Concept enemy base ideas around pirate theme. Colour distinguishes each side from each other.

# Character Development

Inspirations:

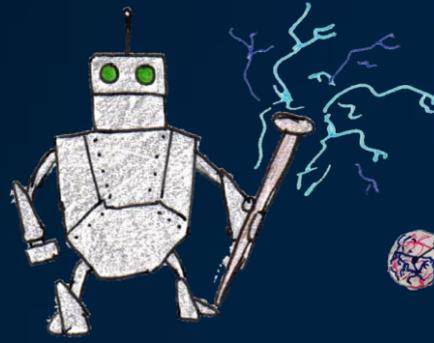
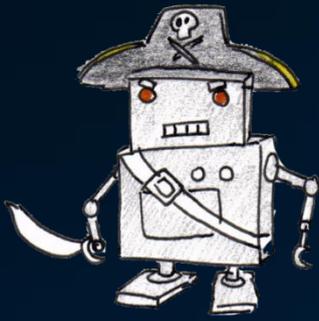
League of Legends was a big influence on the robotic side, along with the enemy characters from Rayman 2: The Great Escape.



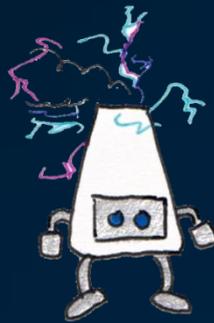
The many playable characters in League of Legends became a large influence, which ones such as 'Blitzcrank' and 'Teemo', giving way to ideas for tank and grunt models.



# Initial Ideas and Sketches

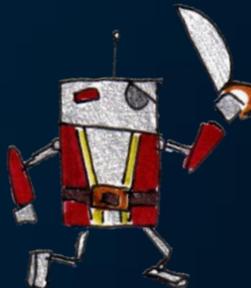
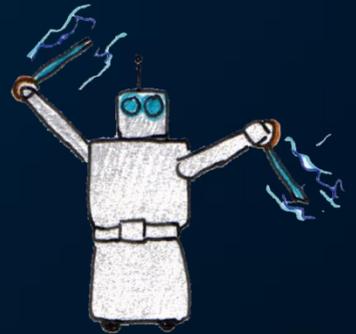
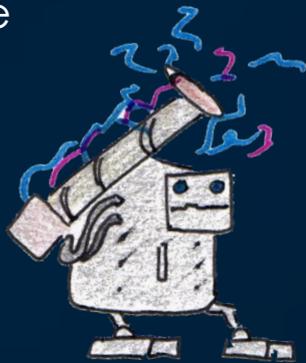


Alex Kinsey



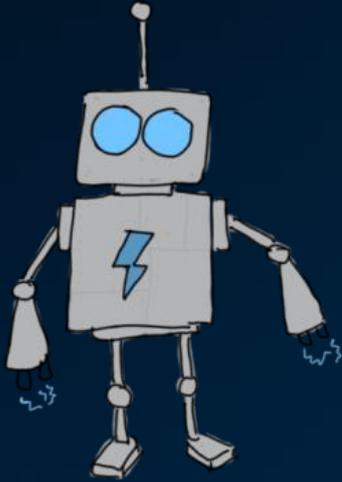
Thomas Fyfe

# Army Structure

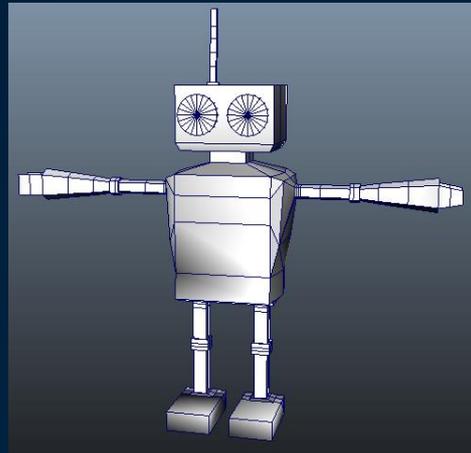


# Developed Character Ideas

## Tesla – Melee Unit

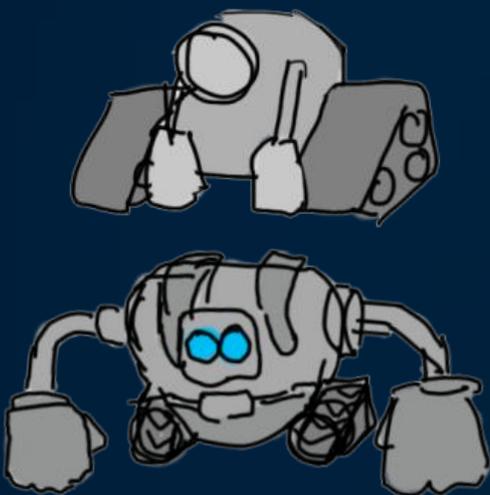


Thomas Fyfe



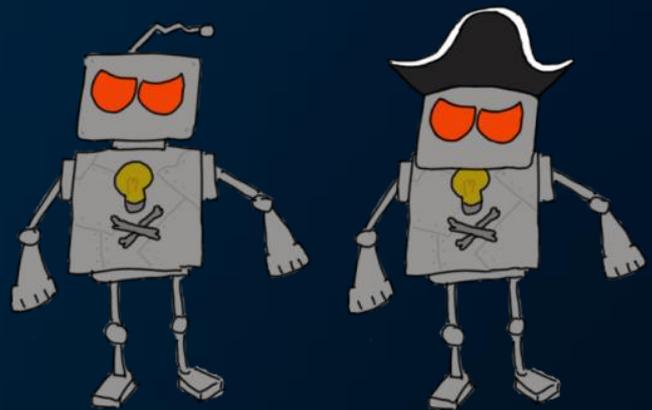
Ryan Shearer

## Tesla – Tank Unit



Thomas Fyfe

## Edison – Melee Unit



Thomas Fyfe

# Implementation

## Software Packages

3D Assets	-	AutoDesk Maya 2015
Rigging	-	AutoDesk Maya 2015
Animation	-	AutoDesk Maya 2015
Textures	-	Adobe Photoshop, xNormal, Mudbox, Zbrush
Engine	-	Unity 4.5

Maya 2011 used initially, Maya 2013 was used for exporting FBXs due to a 2011 bug. Upgraded to Maya 2015 in early 2015.

## File Formats for Engine

3D Assets	-	Filmbox (FBX)
Image Assets	-	Portable Network Graphics (PNG)

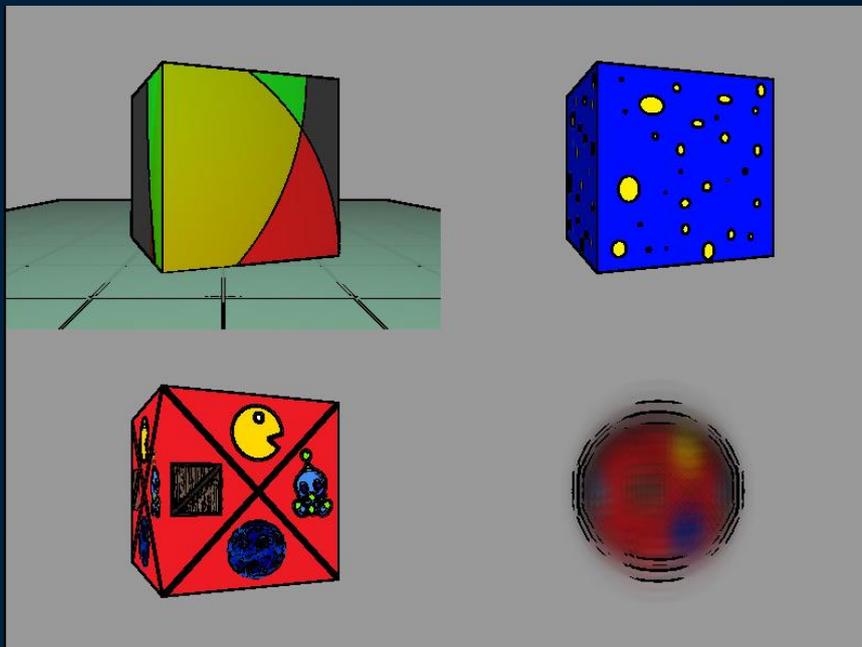
## Technical Specifications

2D Layers	-	16:9 aspect ratio
Max Texture Resolution	-	1024x1024
Max Poly Count	-	TBD

# Guidelines

## 3D Production Process

The 3D art style has a culmination of the artists own personal style, intertwined with the already established art style of Guerilla Tea games. Their original titles 'Incandescence', 'The Quest', and their prototype 'Fangs Out!' have a very colourful, bright colour scheme, with textures adhering to a cell shaded aesthetic. The textures in our game concept have also been designed with a cartoon-esque look within Photoshop, with the intention of implementation within Unity. Our coding team have developed a new shader which can find the outer edge of an asset, giving it a bright, dramatic colour ramp and a bold black outline.



John Torrance

The 3D models take a lot of influence from Dead Island. Dead Island has a beach the player can explore, with a variety of assets such as parasols, towels, and a beached boat.



The overall tone is right, with the island being abandoned, as will Tesla's secret island base. The lighting has to change to suit the mood, and will overall be a lot darker. Each model will be created with a low polygon count, and if necessary, have softened normal to contrast the hard normal of the more manufactured elements of the game, such as the robots and metal pipes.

The environment is key to immerse the player within the game, and the environment seeming like a genuine place with believable props is key to this. Here is an example of some environment assets, and how they will fit in.

Ryan Shearer

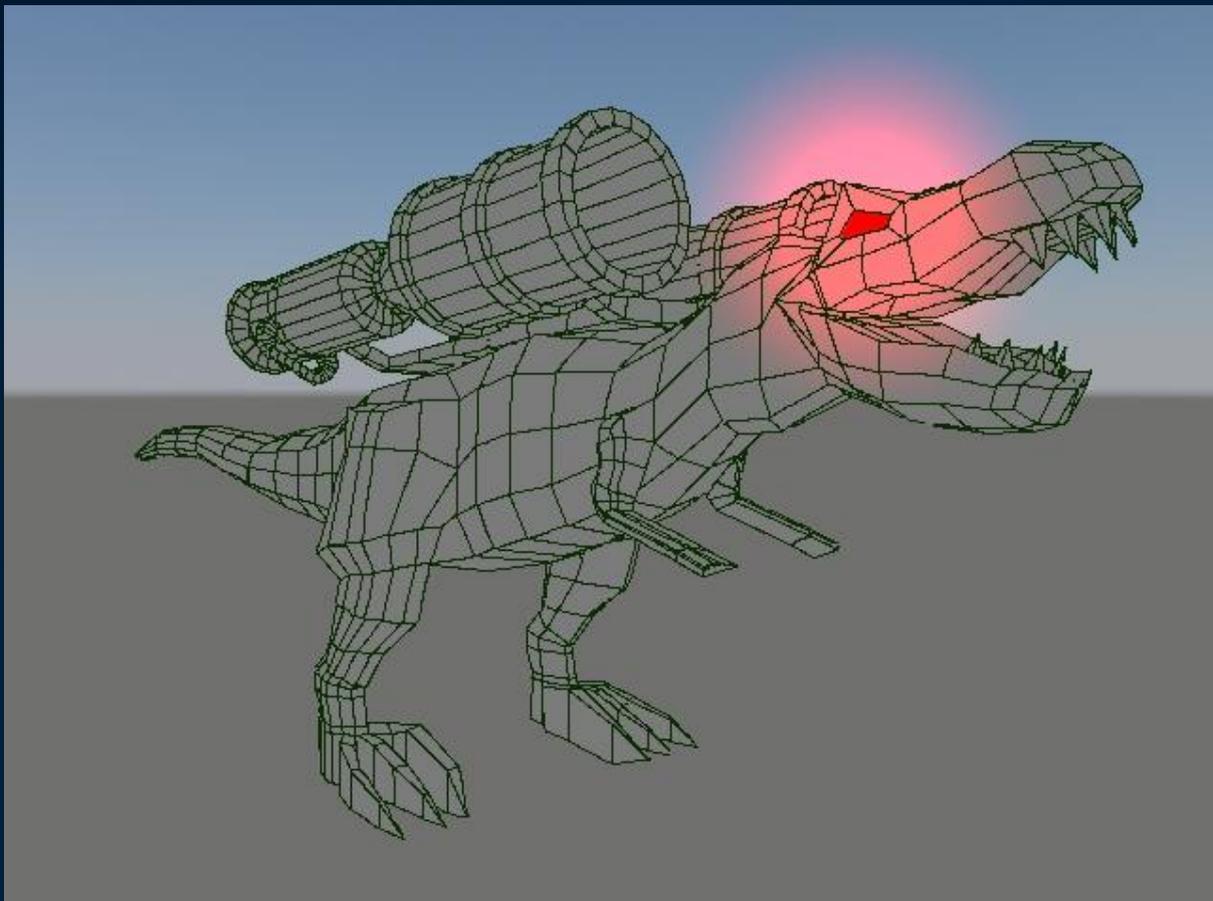


The above image shows the final style, but brightened for ease of viewing. To create the same, use a basic albedo and apply a wave normal map on top. This will give the effect of ripples in the sand. The set dressing will be a simple set of geometry, and base colours as to not detract from the action. The textures on the main building and other focal points must be light, recognisable, and high quality. The windows are simply base colours, and add to the cartoony look.



Included are some low poly rocks, boat, beach chairs, and a pipe with waste coming out of it. Being on a remote island, these assets seem to work to the advantage. The boat and rocks are emphasising the abandoned island idea, and the deckchairs are essentially part of the tongue in cheek humour.

Ryan Shearer  
Ryan Shearer



This is the robot Dinosaur. With it, and other assets that are focal points of the game, place a lot of detail in the mesh. This allows for higher detail animations and will look better at close range. It was modelled with the idea of each polygon being large, to give a very rigid, robotic

form. Every characters eye will glow much like this, with the colour dependant on health and team.



Creating these assets for Unity is a relatively easy process. The grid can be left at the default size, as the file (textures and animations) can be directly placed into Unity.

Assets are designed to be low poly for ease to the browser, but also of high enough quality to look good at medium zooming level.

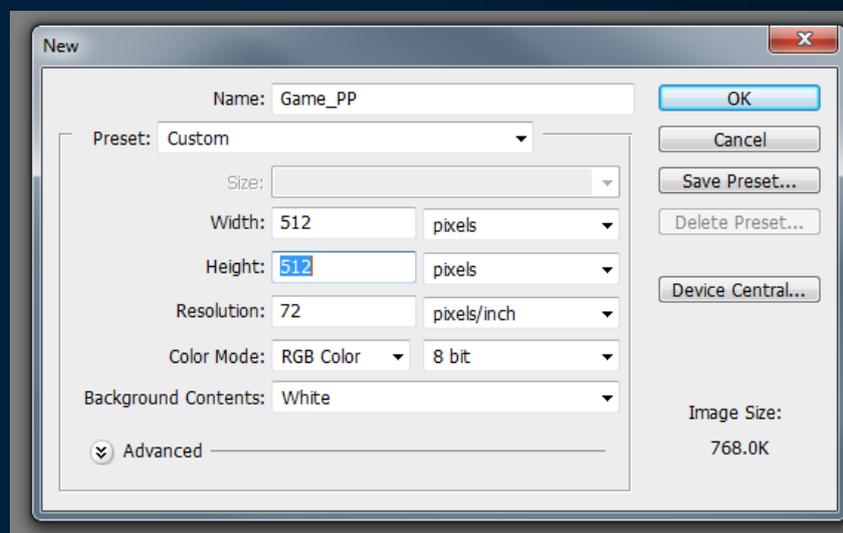


## Texture Production Process

The game is built for play in a browser, so Polygon efficiency and small texture sizes/ formats are a priority to the art team. For the majority of textures on 3d Models, Targa format is used due to its small size and good quality without compression, and PNG's are used for assets such as grass due to their transparency information. Iterations of textures were created as 1k and .5k pixels, to test what the engine/ browser runs best with, whilst maintaining the highest quality. Each texture is created in Photoshop, with the resolution set to a pretty moderate 72dpi. Each texture is handcrafted, using bold colour to define each team (Edison & Tesla).

Creating the textures uses many layering effects within Photoshop. Start off with a 512x512 UV of the model needed, and add a new layer. Flood it with the underlying colour such as Silver for Robots and Dark greys for weapons.

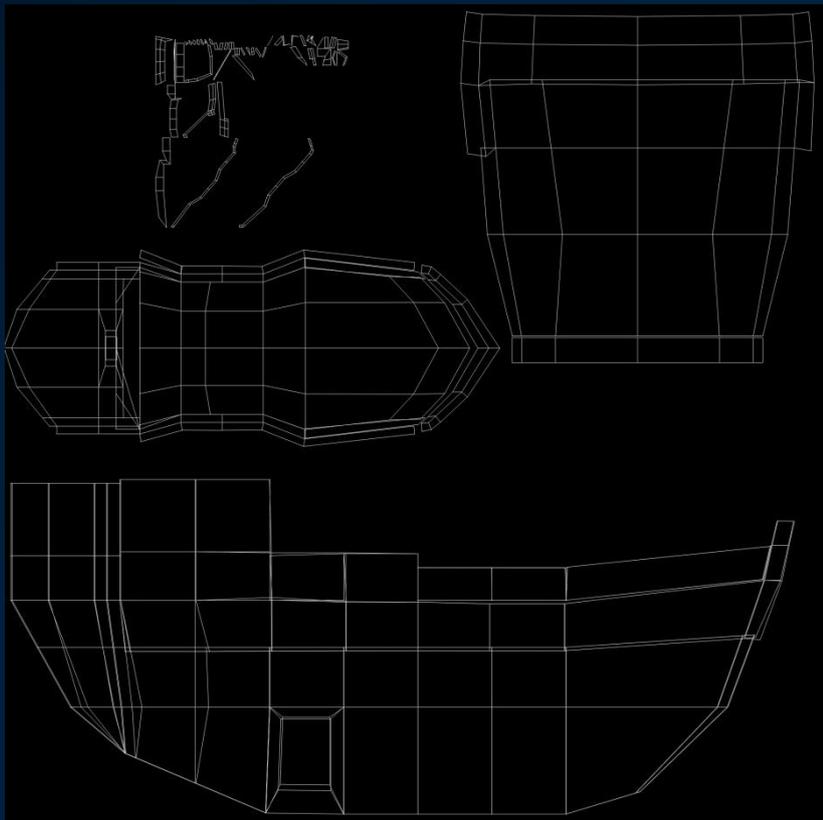
See Photoshop open files data:

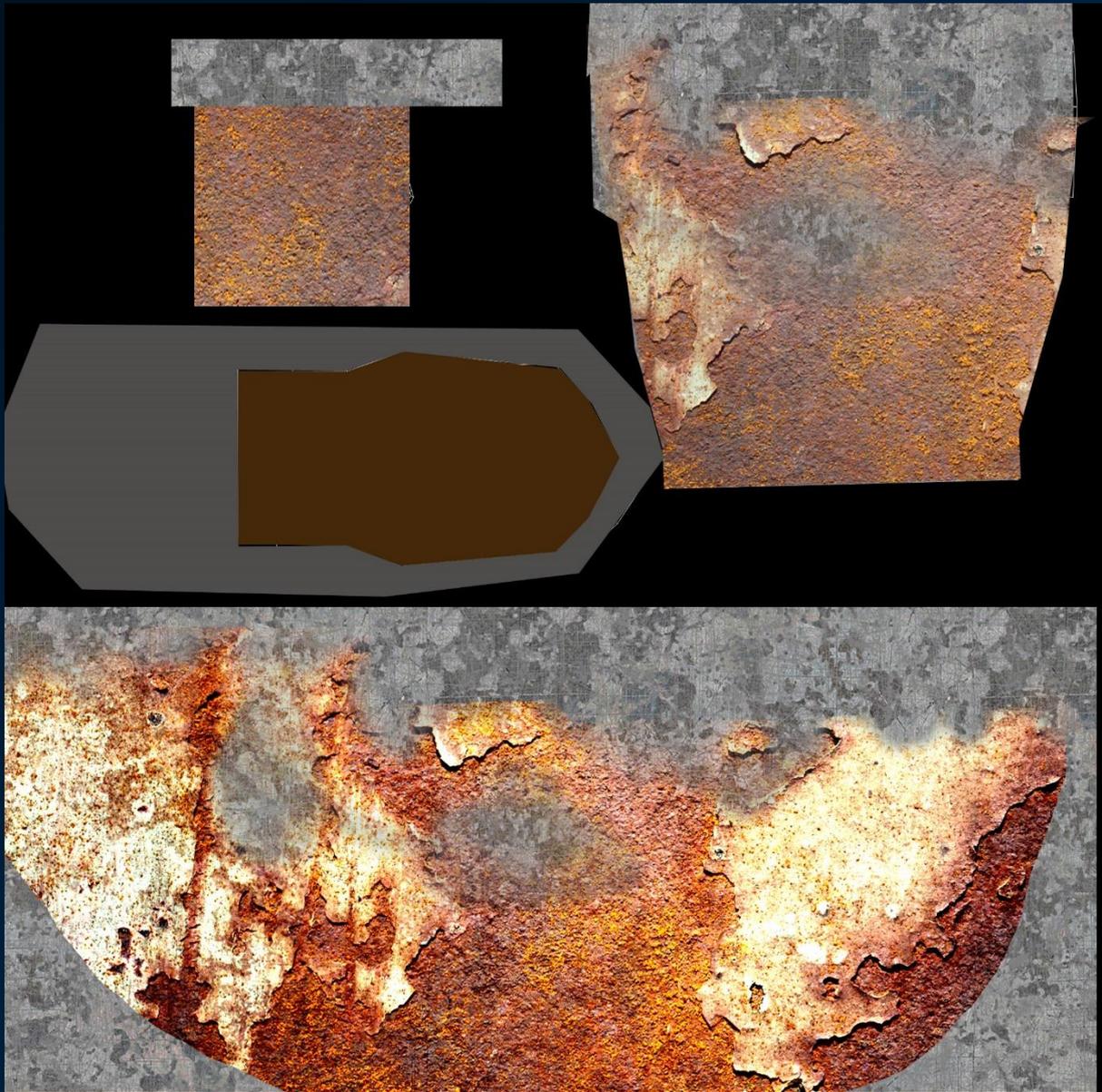


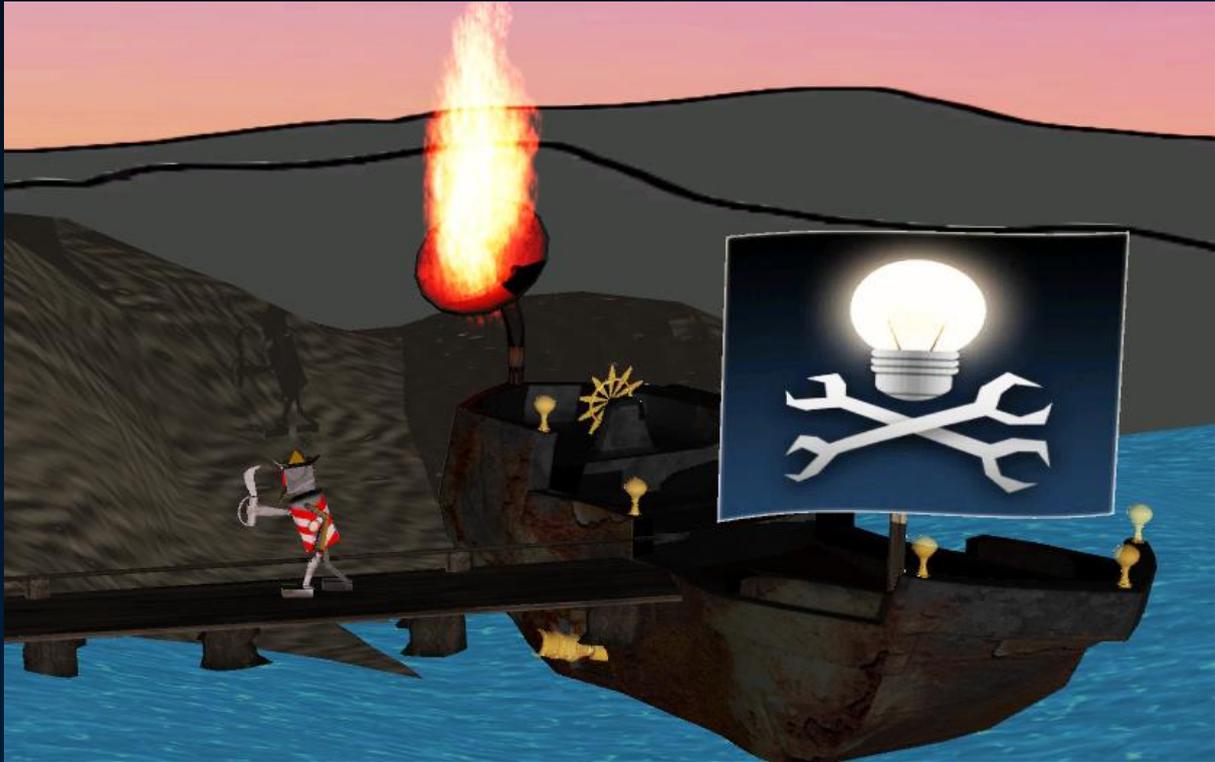
512x512 is the average size, and 72ppi is enough for the image to be clear whilst keeping the image relatively low resolution.

Ryan Shearer

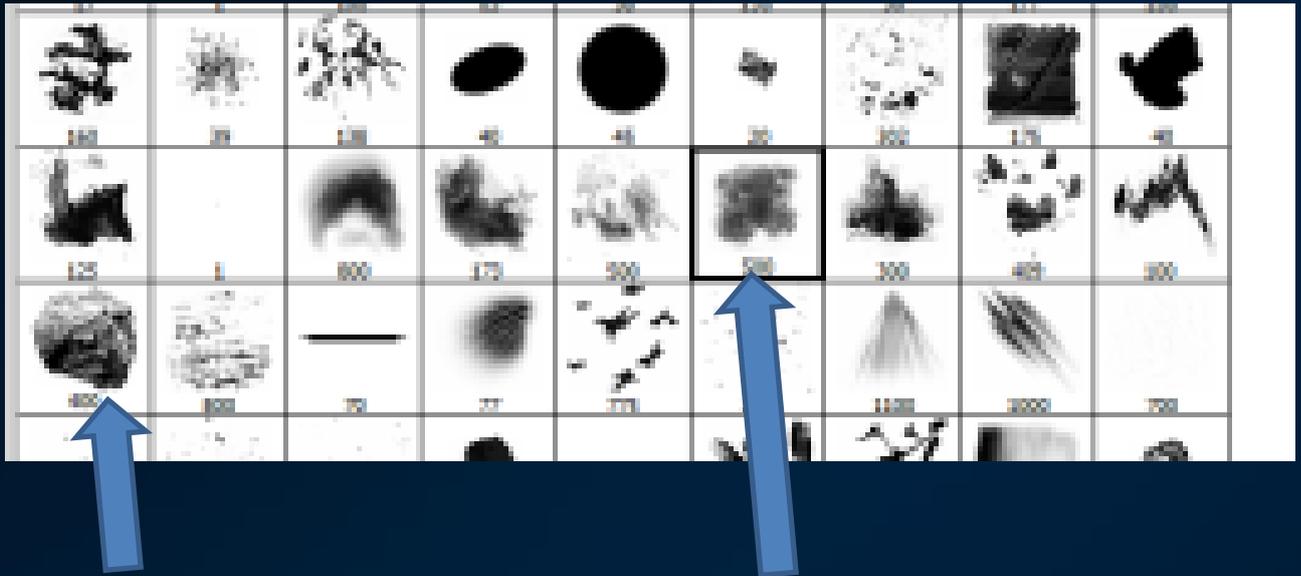
The UV Map should be laid out, and to save space, any mirroring sides should be overlaid. In most, if not all instances, only one side of an asset will be shown.







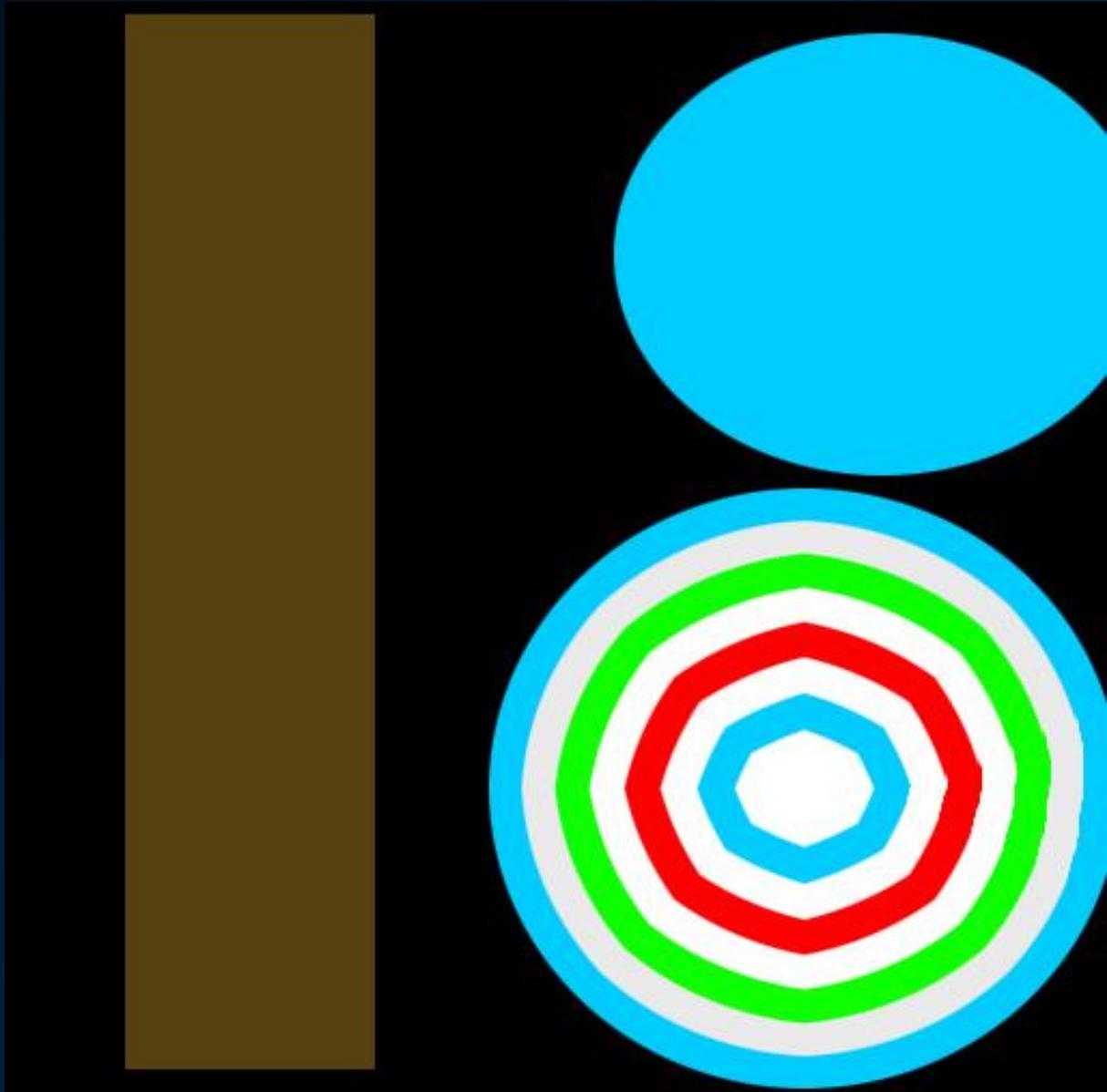
Begin with getting an Occlusion Map in Maya, by enabling Mental Ray, and by Batch Baking through the Lighting/Shading Menu in the Rendering subset. Once this is extracted, clipping mask on a new layer to a black layer above the UV. Then open another layer below the black layer, and begin painting. As for this game not a lot of textures will be high definition or highly visible, we can be vague. Flood areas with full colours and begin adding detail. For grime and dirt, a brush pack by Jonas-De-Ro is incredibly handy, with these brushes in particular.



Use the smudge/cloud brush to create an area for the dirt, and add detail with the rock brush, which gives the effect of scratches or mud. Then add a charcoal brush with a medium opacity to add some texture.

With assets less in the focal areas, use base colours to give the look of undetailed, distant items. This is useful for set dressing, such as the beach parasols.

Ryan Shearer



## Lighting:

Ryan Shearer

The lighting used in the game is reminiscent of the first concept art sent by Guerilla Tea. The edges of models are highlighted in light blues (For Tesla), and will be another colour (Most likely red or yellow) for Edison. The central

areas of the characters and environments are very dark, therefore not a lot of detail will be placed around the middle of the mesh.

The art team took considerable influences from 80's music styles and Far Cry 3's DLC 'Blood Dragon', in the Tron-esque vein of style. I will take this influence and apply it to the texturing. Blood Dragon used a lot of Neon, bright colours contrasted with dark, muted reds, blues and black. The style personally reminds me of the style of the original Total Recall and Robocop, generally the style of the 1980's trying to foreshow the modern, technologically focused future of the 2020's onwards.

# 3D Character Rigging and Animation Process

Thomas Fyfe

Character designs are worked on by the whole art team and a final character model is made by Ryan Shearer.

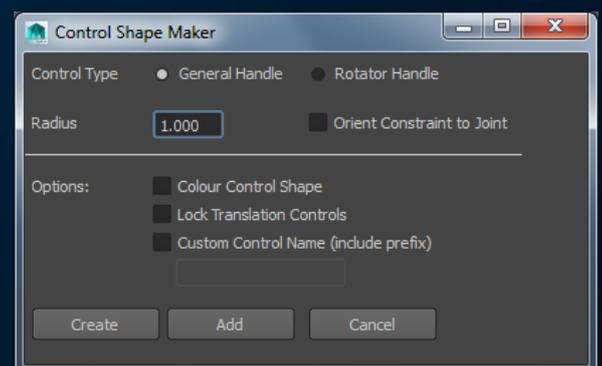
The whole process was iterative so sometimes assets were sent back to modelling for correction; assets were sometimes sent back to animation if an import problem occurs.

## Mesh Corrections

- UV Maps are checked to be present.
- Group meshes as appropriate.
- Delete histories and freeze transformations.
- Give appropriate names to meshes.
- Ensure minion models are scaled to each other.

## Rigging

- Create control shapes using custom scripting tool (designed by Thomas Fyfe in 2014).
- Add joints if necessary.
- Add orient constraints or parent constraints.
- Use naming conventions:
  - Groups - grp\_controller, grp\_controller\_offset
  - Controls - ctrl\_controller



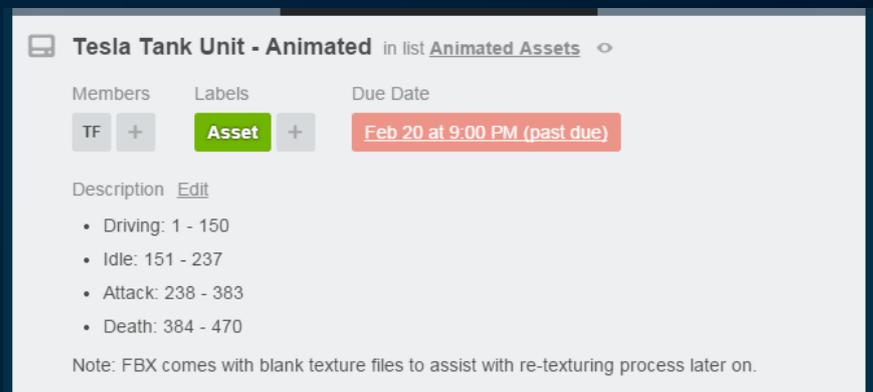
- Organise hierarchy.

## Skinning

- Apply 'Interactive Bind'.
- Use 'Paint Skin Weights' tool to distribute skin weights on mesh.

## Animation

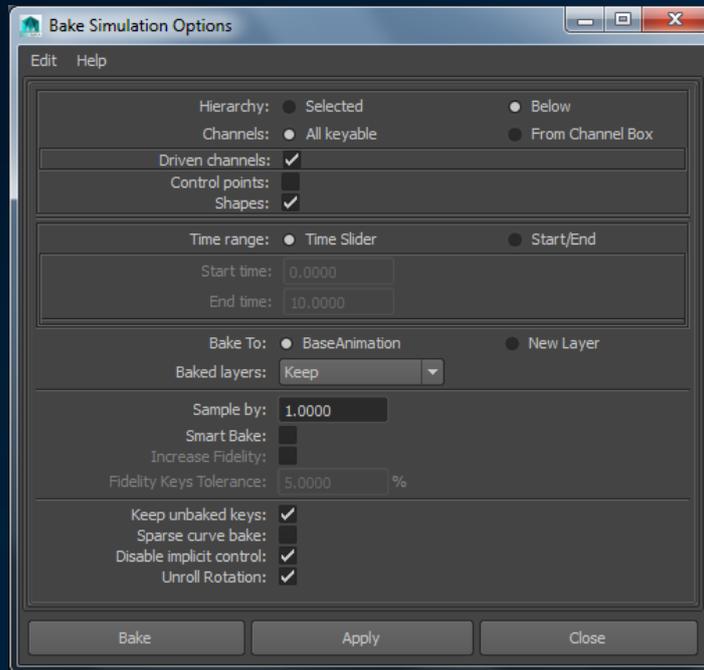
- Bind pose at frame 0
- Only keyframe the attributes that are moving (as opposed to all attributes on that control shape)
- Log completed animation progress on Trello.
- Use Trello to log where an animations starts and ends on Trello.



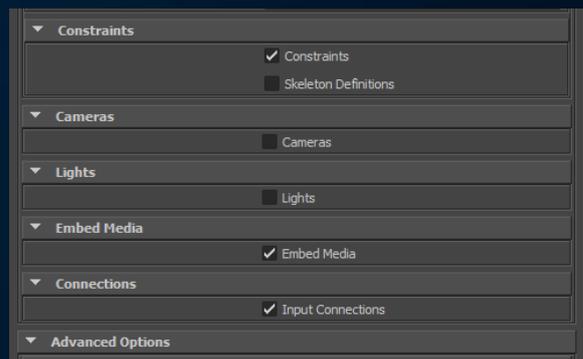
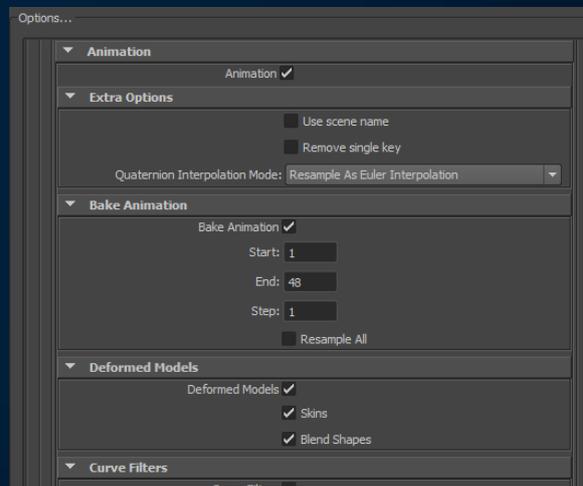
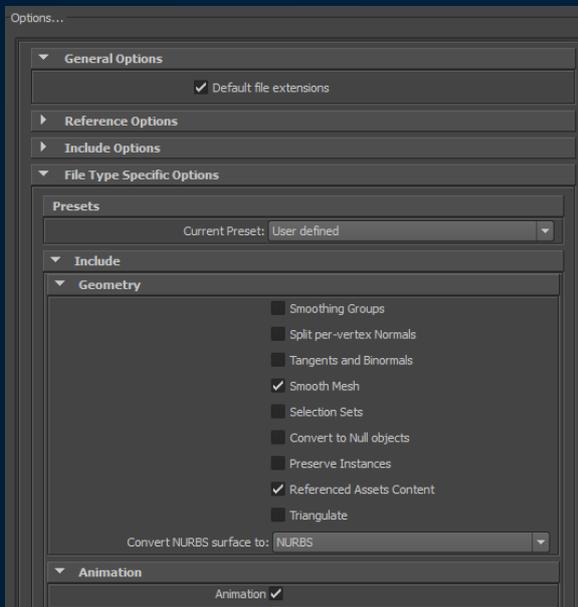
## Exporting

- Select root joint, right click and 'Select Hierarchy', then shift click and select all polygon meshes.

- Edit > Keys > Bake Simulation' using following settings:



- Export as FBX using following settings:



## Importing to Engine

The finished asset is handed over to Michael Daltrey, the programmer handling the animation events.

- Import to Unity under 'Models' folder.
- Define 'clips' based on Trello frame ranges.
- Bake Root Transform Positions into Pose.
- Add 'Events' to frames where necessary.

This concludes the animation pipeline, the animations are then synched up in the code to change under certain actions and to imitate events.

# Asset List

## Units – Tesla and Edison

<b>H</b>	High Priority
<b>M</b>	Medium Priority
<b>L</b>	Low Priority

- Melee
  - Modelling **H**
  - Texturing **H**
  - Rigging **H**
  - Animation
    - Idle **M**
    - Attacking **M**
    - Death **M**
    - Walking **M**
- Ranged
  - Modelling **H**
  - Texturing **H**
  - Rigging **H**
  - Animation
    - Idle **M**
    - Attacking **M**
    - Death **M**
    - Walking **M**
- Tank
  - Modelling **M**
  - Texturing **M**
  - Rigging **M**
  - Animation
    - Idle **M**
    - Attacking **M**
    - Death **M**
    - Walking **M**

## Bases

- Tesla
  - Building
    - Modelling **H**
    - Texturing **M**
  - Dinosaur
    - Modelling **H**
    - Texturing **L**
    - Rigging **H**
    - Animation
      - Idle **M**
      - Projectile Shoot **M**
      - Special Start **M**
      - Special Wait **M**
      - Special Activate **M**
      - Special End **M**
- Edison
  - Building
    - Modelling **H**
    - Texturing **M**

## Level and Environments

- 2D Layers
  - Foreground **M**
  - Mid-ground **M**
  - Background **M**
  - Sky **M**
- 3D Layer
  - Ground Plane
    - Modelling **M**
    - Texturing **M**

## User Interface

- Main Menu **L**
- Tooltips
  - Health bars **M**
- Game HUD
  - Toolbar - Unit Selection **H**
  - Radial Menu
    - Unit Upgrades **M**
    - Base Weapon Selection **M**
    - Base Weapon Upgrades **M**
  - Score, Health and XP Display **M**

# Time Schedule

<b>Task Name</b>	<b>Assigned To</b>	<b>Due Date</b>
<b>Friendly Melee Unit</b>	Art Team	13/03/2015
<b>Friendly Ranged Unit</b>	Art Team	13/03/2015
<b>Friendly Tank Unit</b>	Art Team	20/03/2015
<b>Enemy Melee Unit</b>	Art Team	27/03/2015
<b>Enemy Ranged Unit</b>	Art Team	27/03/2015
<b>Enemy Tank Unit</b>	Art Team	03/04/2015
<b>Friendly Base Structure/Dinosaur</b>	Ryan Shearer, Thomas Fyfe	20/03/2015
<b>Enemy Base Structure</b>	Ryan Shearer	20/03/2015
<b>Draft Friendly Melee Unit</b>	Art Team	06/02/2015
<b>Draft Friendly Ranged Unit</b>	Art Team	06/02/2015
<b>Draft Friendly Tank Unit</b>	Art Team	13/02/2015
<b>Draft Enemy Melee Unit</b>	Art Team	13/02/2015
<b>Draft Enemy Ranged Unit</b>	Art Team	20/02/2015
<b>Draft Enemy Tank Unit</b>	Art Team	20/02/2015
<b>Draft Friendly Base Structure/Dinosaur</b>	Ryan Shearer, Thomas Fyfe	13/02/2015
<b>Draft Enemy Base Structure</b>	Ryan Shearer	13/02/2015
<b>Menus' Art</b>	Alex Kinsey	27/02/2015
<b>Draft Menus' Art</b>	Alex Kinsey	06/02/2015
<b>Background Art</b>	Art Team	30/01/2015
<b>Draft Background Art</b>	Art Team	16/01/2015

Time schedule draft written in December 2014, not accurate of actual completion dates.