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Demo Reel Breakdown

The Order: 1886

I was originally hired as a visualization optimization artist to set up pre-computed visibility scenes for levels. The visibility optimization I worked on for Ready at Dawn is similar to how UDK's (Unreal Development Kit) pre-computed visibility is setup: I placed cells and visibility points throughout a level so that occlusion culling can be baked on a per cell basis. Each level was adjusted to meet design changes and rigorously play tested to ensure no geometry was "popping" or dropping out accidentally. I also worked with other artists to adjust geometry and correct visibility issues when needed in addition to correcting other game bugs when found. In order to facilitate easier workflow, I wrote some small personal tools using Python for vis optimization.

I completed my optimizing tasks much quicker than expected which allowed me to take on other tasks. This included setting up level collision, optimizing geometry, creating occluder geometry and rigging. I had specialized in rigging and quickly took on the large task of helping the rigging team with the large backlog of character skinning. *The Order: 1886* has many different types of background characters and highly detailed faces. An outside studio created the base facial models and rigs, but they needed to be adjusted and skinned to the many different types of characters in game. My teammate and I completed the majority of the skinning and cleanup of the background and bit characters in the game.

Visibility Responsibility:

◇ **Levels:** Prologue, Whitechapel, Tesla's Lab, Funeral, Catacombs, Eplilogue.

Rigging Responsibility:

- ◇ **Faces:** Skinning and cleanup of numerous different types of faces, both high/hero quality (250+ joints) and low/background quality (60+ joints). This included Rebels, Guards, Asylum escapees ("Gaunt"), Darwin, Dunglass, Augustus, female (young and elder), and others.
- ◇ **Bodies:** Skinning and cleanup of different body types consisting mostly of Rebels, Low Class characters, Middle Class characters, Ladies, Guards, Dismember bodies, Darwin, Dunglass, Doyle and others.
- ◇ **Other:** Setup some prop rigs such as interactive drawers, doors, and cabinet doors.

Tools Used:

◇ Maya, Ready At Dawn's proprietary game engine, Python, Perforce versioning software.

Thesis Work: Group Based Rigging of Realistically Feathered Wings

Treatment of avian wings in CG often results in lost realism due to the incorrect form and motion of the feathers. My thesis project focuses on the creation of a rigging method utilizing the groupings of feathers found in real bird wings. This results in a more natural look, more believable wing movement, and helps add to the presently slim body of freely available knowledge and tools for creating realistic avian wings. Both the rig and the thesis paper describing how to implement it are freely available for anyone to use on CreativeCrash.org and my personal website. This is currently an ongoing work- Version 2.0 has been released for download. This new version, includes many updates and bug fixes, such as the ability to create different wing types (hawk and falcon.)

Features

- ◇ Script generates the rig based upon user input of wing bone positions and the amount of feathers. This gives the user the ability to create a wide range of wings.
- ◇ Super-controls to pose wings quickly and easily.
- ◇ Sub-controls to pose individual feather groups. Control over individual feather groups allows for a high level of artistic control over the wing.
- ◇ FK/IK Blending.

- ◇ Controls to automatically close and open the wing.
- ◇ Shapes to adjust the curl of the feathers.
- ◇ Ability to create different wing shapes.

Tools Used

- ◇ GUI and Script for control system generation created using Python and Maya 2011.

Hawk Rig

Personal project for fun and practice and also a companion to the wing rig. I was responsible for all parts of this project (modeling, rigging, deformations and animation.) Lighting help from Austin Hines.

Features

- ◇ Integrated with Wing Creator wing rig.
- ◇ IK/FK blend on legs.
- ◇ Quick pose control on head allows for rapid posing of the head and neck, as well as sub controls for refinement.
- ◇ Tail has a system similar to the wings, allowing spreading and twisting of the tail and feathers.
- ◇ Full FK feet and spine.
- ◇ Facial controls for expressions using blendshapes, clusters, and joints.
- ◇ Corrective blendshapes to maintain muscle/feather mass in neck and wings.

Tools Used

- ◇ Some Python, Mel and Maya 2011.

Clunker Charlie Robot Rig for “Stuck”

“Stuck” by Team DreamDorks is a short animation created during the Summer Industry Course (Viza 627) at Texas A&M University in conjunction with DreamWorks Animation. The course is 10 weeks long and was taught by DreamWorks Animation. Each team of students has to develop a storyline around a simple concept and produce a thirty-second short. Each team member has two sections of the project in which they are the lead. Leads are responsible for overseeing work in that area. As the modeling lead, I ensured that all models were completed in a timely fashion with acceptable quality, and I troubleshooted any and all problems along the way. As rigging lead, I rigged the robot and worked with the animation lead to make sure that it could perform all of its functions in the script. Once my modeling and rigging lead duties were complete, I worked on other areas of the pipeline, such as animation and lighting.

Team DreamDorks members and project roles

- ◇ **Rachael Bradley** – Animation and Surfacing lead
- ◇ **Jonathan Greenwald** – Layout and Lighting lead
- ◇ **Heather Howard** - Modeling and Rigging lead
- ◇ **Sowjanya Kollu** – Rendering and Calendar lead
- ◇ **Mathew Sanford** – FX and Pipeline lead

Clunker Charlie Robot Rig Features

- ◇ Rigged in three weeks.
- ◇ IK on legs and arms for main control.
- ◇ Automatic hand close control with FK control on fingers for fine adjustments.
- ◇ Suction cup feet squash blendshape, which offsets as it is keyed in to stay planted.
- ◇ Aperture “eye” control and lens canister barrel control. Barrel automatically spins as the lens canister is pulled out.
- ◇ Hands can switch between following body and following world. This allows the animator to lock the hands onto a target (in this case, the rock in the short.)

Other Tasks

- ◇ Drawings for layout and for original designs of Charlie and the ship.
- ◇ Reference and texture research.
- ◇ Animated Scenes 1 through 5 (Charlie hands close-up [1] through Lights go dark and Charlie throws hands up in dismay [5]), 7 (stare at stuck meteor and start throw shoulder into it), and 12 (Charlie is blown out of the ship).
- ◇ Modeled Charlie’s camera lens “eye”, various tools (cut from final), the meteor and cleaned up modeling on the ship.
- ◇ Lighting on scenes 2 (Meteor strike) and 5 (Charlie throws hands up in dismay).
- ◇ Render wrangling.

Tools Used

- ◇ Modeled, rigged, animated, lit, and effects done in Maya.