

Shawn DePriest Tools Summary

Below is a summary of some of the more interesting tools that I have written while at various companies.

General:

projectManager.mel

Will keep all projects organized in one handy interface. Makes creating a referencing structure quick and easy. Includes a batch processing procedure to batch a folder or selected scenes.

PerforceMayaUI.mel

Maya UI with command line calls to Perforce for adding, submitting, reverting, and deleting files. UI image updates to reflect the current state of the file.

autoBack.mel

Auto backup utility. Set the backup folder, interval time, and number of backups. Uses scriptJob with timerX command.

batchProcessor.mel

Will recursively recreate a directory and sub folders, while batch processing each Maya file within to a user defined script.

gridTools.mel

Enables artists to set real-world grid sizes in miles, yards, feet, inches, kilometers, meters, centimeters, or millimeters.

tearOffShelves.mel

Custom shelf system in a floating UI. User size-able and expandable. Saving and loading enabled.

renamer.mel

Renaming utility with three modes: search and replace strings, rename incrementally, and prefix/suffix.

toggleLayerVis.mel

Will turn on visibility of current layer, while turning off other layers. Step up or down through layers, enabling accurate LOD comparison .

integrityCheck.mel

Run as a pre-exporter to check for issues that crash viewers (invalid names, extraneous nodes, invalid geometry, etc.)

Modeling:

superMirrorYZ.mel

Mirrors polygonal geometry and clusters. Merges verts, soften seams, and has option for flipping UVs.

normalCopier.mel

Copies normals from one object to another, of equal vert count.

randomVertColor.mel

Used in stadium construction to randomize vert colors based on user input. Used on crowds for uneven shadow distribution.

randomizer.mel

Will randomize vert or object locations based on a user setting.

snapVerts.mel

Will snap verts of one object to the location of another object based on user tolerance.

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Rigging:

customRig.mel

A tool for creating perfectly symmetrical and motion capture-ready skeletons. Will create a rigged proxy that controls a high-res mesh. Complete with phoneme system and driven keys for fingers.

findInfluences.mel

Will find verts that have more than two joint influences (or a user specified number of joints).

importAndBind.mel

Importing a scene with the same skeleton as one already opened will bind all imported geometry to the existing skeleton, and delete imported skeleton.

retarget.mel

Used for joint retargeting in unique head creation. Joints are imported, weighted, and offset for the amount verts have moved, based on config.txt

weightsSaver.mel

Save, load and import weights using several methods. Save to the verts themselves via blind data, or as an external weight file. Load by number, proximity, or tolerance. Import objects by transferring skinClusters, or reading values from blind data.

Animation:

rotoStudio.mel

Store reference footage as .jpgs in a predefined "RotoStudio" directory. In Maya, use the RotoStudio menu to select the reference footage. Image planes are automatically created and mapped with the footage. Includes a step attribute for sequences that have been "shot on 2s", etc.

adjustTangents.mel

Uses an $\arctan(b/a)$ formula to calculate an angle from two keys with attribute and time values. Rotates tangent to point at adjacent left or right key. Beneficial when range deleting mocap, so curves flow naturally.

poseGrab.mel

Gets key-able attributes for selected nodes at current time and saves value to a shelf in the form of a button (with icon). Recall pose by hitting button.

cycler.mel

Create half a cycle, run the script, and the other half is generated.

Texturing:

FAOGENUI.mel

A Maya UI which sends command line calls to FAOGEN to bake an ambient occlusion map for the selected object. Also checks files out of Perforce via command line, converts to .tga via Image Magick command line, and converts to .DDS via Compressorator command line.

refreshTextures.mel

Will recursively search a shader network and refresh "file" nodes based on object selection. Will continue through broken shader networks.

flipUVshell.mel

Flips UV shells left and right, up or down, or about a user defined UV coordinate.

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Lighting and Rendering:

renderImageStrips.mel

For large image rendering (poster size), uses the batch renderer to split the image into "strips" based on a user defined number.

Project:

headCreator.mel

Used to create star player heads from a front and side photo. Uses blendshapes, wrap deformers, and projection shaders for rapid modeling.

cinematicTransferRig.mel

Used for transferring rigs from one head to another, offsetting driven keys by the delta value of joint positions.

createAcharacter.mel

Used with multiple meshes bound to a skeleton. User defined character parts, export and cutter paths. Saves data to a text file. Batch export.

autoTalk.mel

Will randomly set phonemes based on .wav file length, or range slider. Realistic random talking.

facesHands.mel

UI with buttons for keyframing multiple blendshape targets to 0 or 1 (engine requirements). Export button for automatically writing .anim to folder.