Problem Encountered:

We'd had our animators working in very messy files. While this didn't effect animation as much, we realized it would effect rendering, and had to find a clean way to move our animation from our bogged down files to our final sequence files.

Contents

Moving Your Animation to Your Rendering File

So, your animators have been working in very rough files. The environment hasn't been updated in a hot second, nodes are everywhere, and now that it's time to render you need everything to be squeaky clean—which means removing your animation from the swamp of old nodes!

First thing's first; you need your Layout Lead (or whoever is setting up your environment file) to optimize that file. This means getting rid of namespaces, unneeded nodes, ect (for more information on this, look into *optimizing scene files for Maya)*. Once this is done (shaders, old history, and unused nodes have been removed—you can check to see if this has been done by the status of your outliner and hypershade) it's ready to take in the animation file.

Because we're lighting by sequence, this means that all animation will eventually need to be imported into a **final sequence file** for rendering. That final sequence file is the **clean file.**

Do not continue working in any dirty files.

These sequence files can be found in the server at:

Z:\TIFFANY\03_Production_Maya\scenes\00_shotTemplates\clean_for_anim

There are eleven files. These are our eleven sequences.

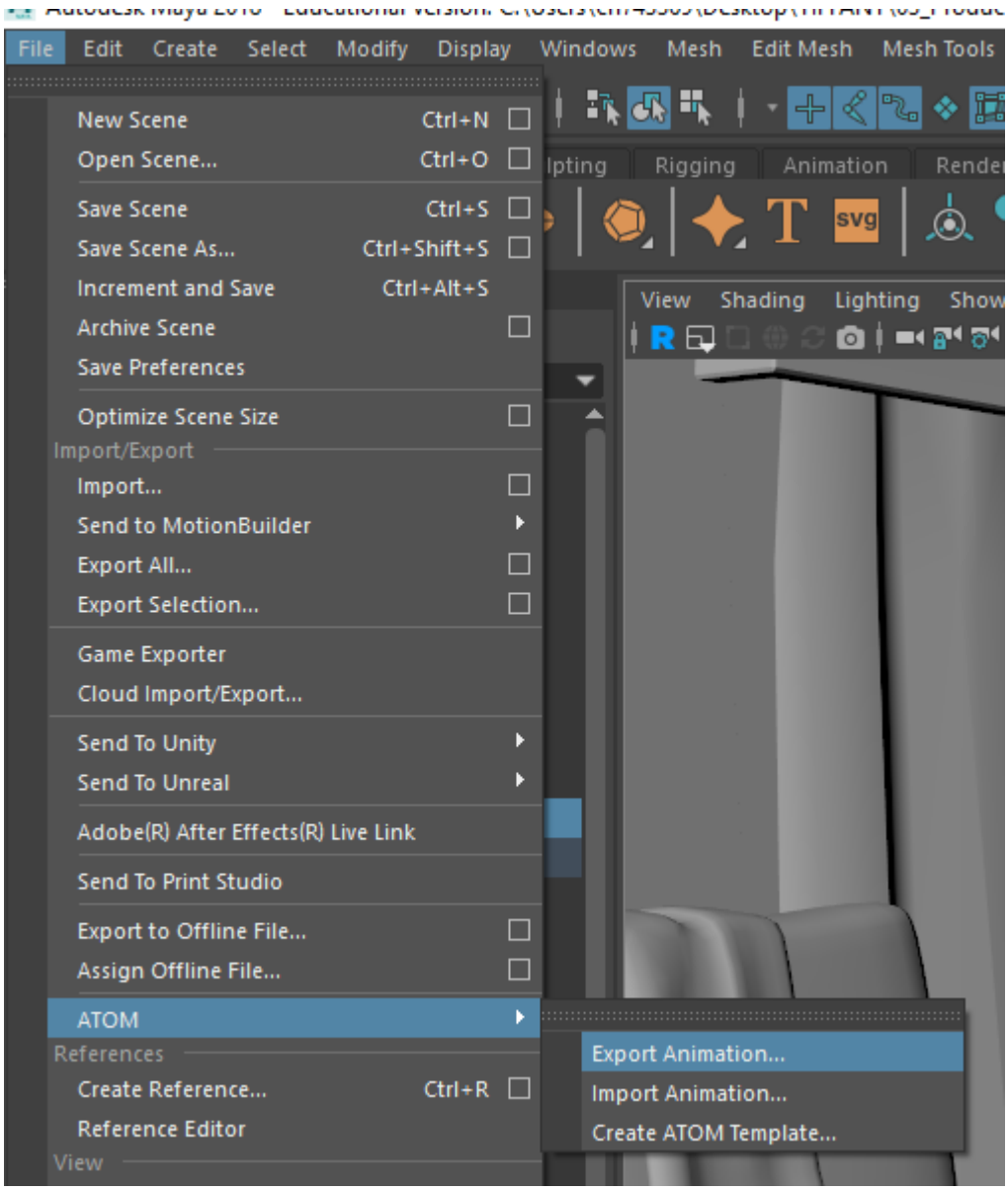
Getting Your Finished Animation into The Clean File

So you've already done animation, but now have to move it to the final sequence file? No problem. You've got two options:

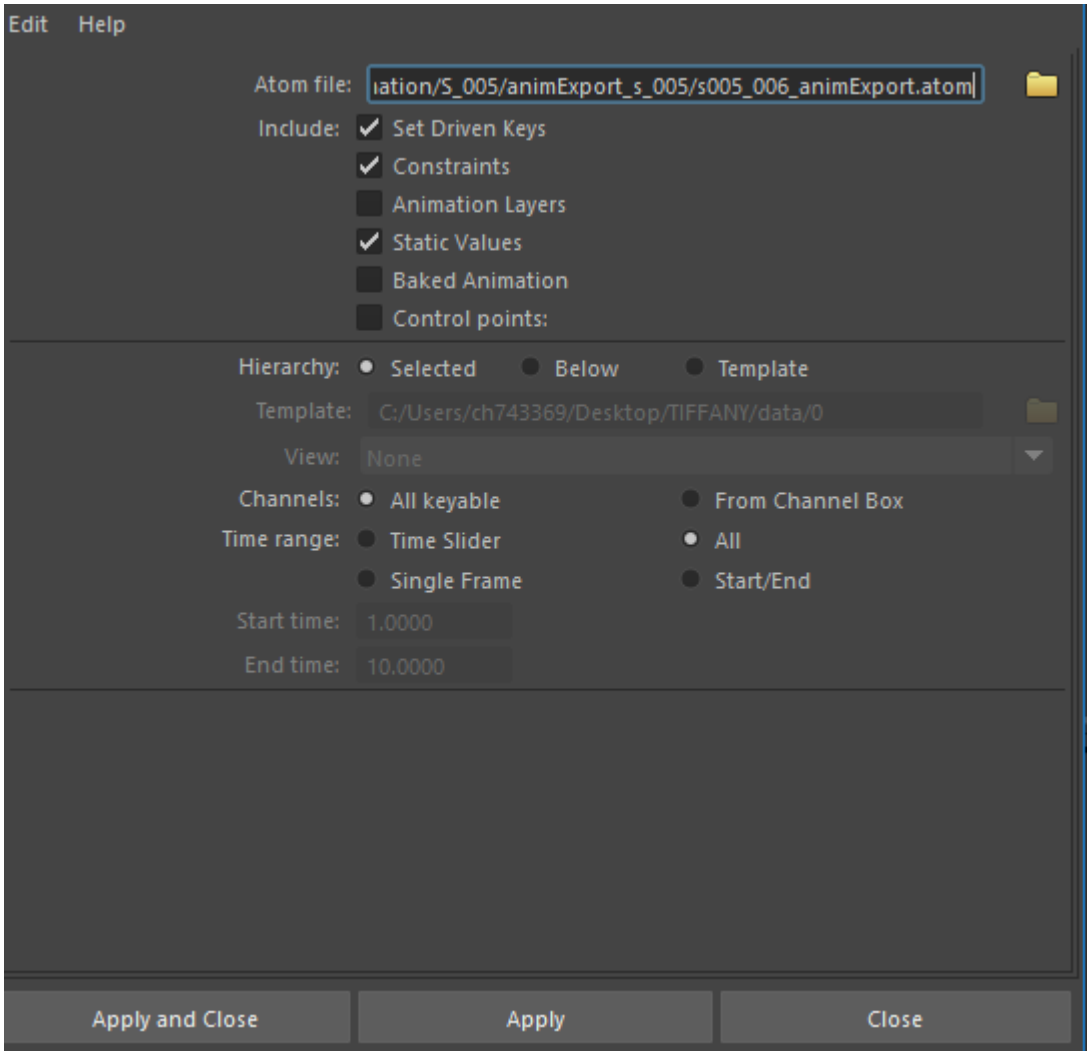
ATOM Export:

Atom export has been more dependable when it comes to copying animation data. ATOM is a plugin that should already be loaded into Maya, but if it isn't, go into the plugin manager, find ATOM, and load it in.

1. Open your "dirty" file.
2. Select all the animation curves for **one character in the shot/sequence.** Make sure you are unable to select geometry **or joints**.
   a. 
3. Go to file >> ATOM >> Export Animation

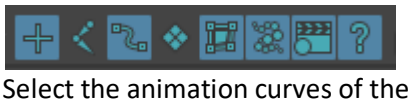


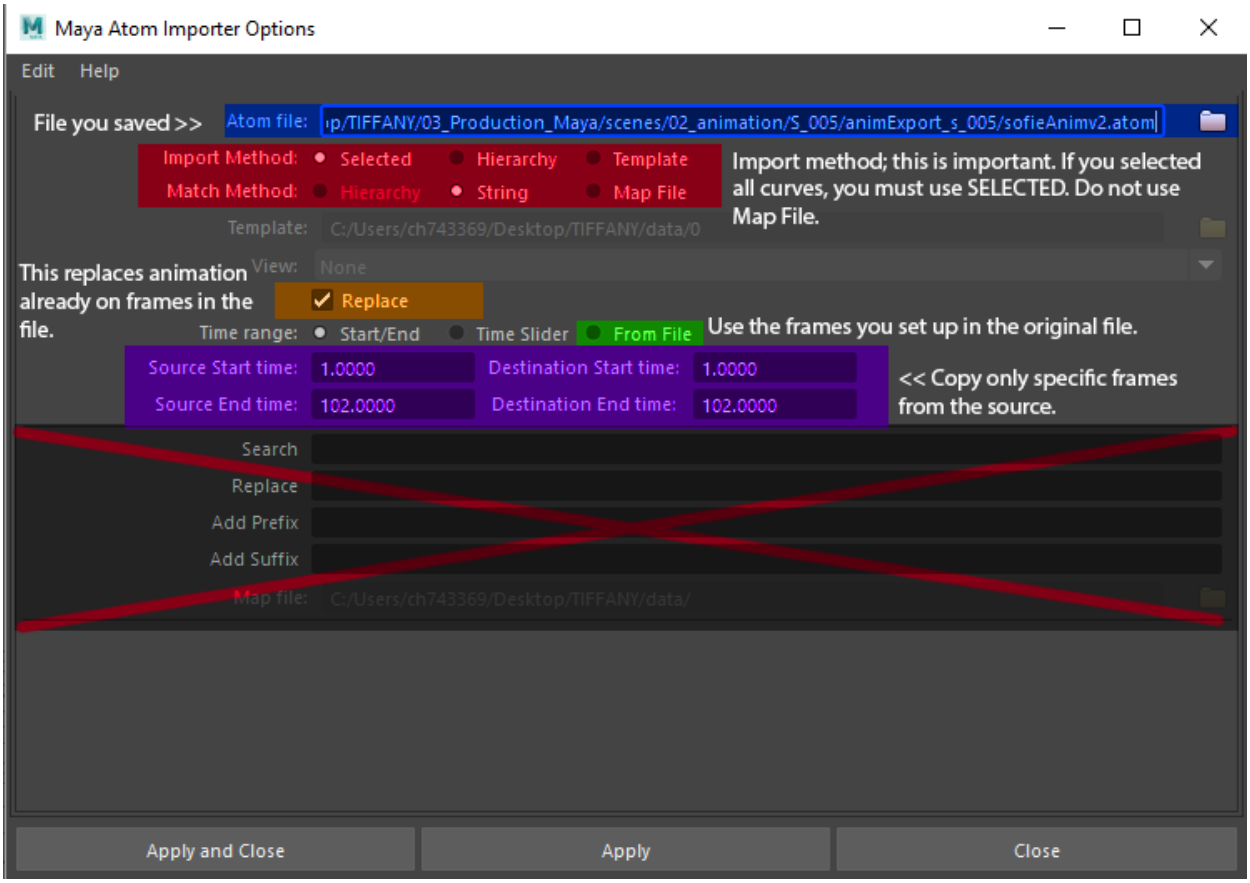
4. Make sure “set driven keys”, “constraints”, and “Static Values” are checked. Hierarchy should read “selected”. Channels should be “all keyable”.
    a. **The file should be named s_[first shot number]_[additional shot number]_animExport.** If you’re only exporting one shot, the “additional shot number” would not exist; if you are exporting more than two shots, add the additional shot numbers as needed.

b. 

5. You should now have a file with your exported animation in it in the directory you specified.

Importing Your Animation

1. Open the clean sequence file. If there are any character rigs in the file, **REMOVE THOSE REFERENCES ENTIRELY AND RE-REFERENCE THE RIGS.** These should have no animation on them, and be in default T-pose.
2. Make sure you cannot select geometry or joints.
3. 
4. Select the animation curves of the referenced rig.
5. Hit file>> ATOM >> import animation.

6. 

7. You need to select the file you just saved by hitting the file icon on the top right. The import method is “selected” because we selected the curves and we’re importing to selected curves. “Hierarchy” can be used for selected a single curve and it’s child joints, but **that causes unforeseen issues.**
8. “String” means it’s looking for curves with the same name to apply to. **This means that if your animation breaks in the future (in a way not listed in the troubleshooting section), it’s likely because a name changed in the rig.** In that situation, we’ll use map files.
9. “Replace” simply means that the atom file will override any existing keyframes.
10. If you only want to import one shot from a sequence, you can either set up a start and end time in the source file or on import.
11. Ignore the “search/replace/prefix/suffix/” section.
12. Hit apply and close. **It should have taken your animation data!**
13. **Save and re-open your file as a new version number.** Sometimes, after saving, atom files will break. You won’t know if you’re all good until you open the file again!

Troubleshooting

Rig only Takes Leg Animation:

This is because you applied the atom file data to the wrong arm set (i.e. you had the ikHand_ctrl selected when you applied the atom file, but you animated using the FK arm controls.) Simply select the FK arm controls and import the atom file to them. If you switch between ik and FK, you’ll need to do this as well.

On Re-Open, Joints are Flying Everywhere

When exporting, you chose to keep "static values" without disabling joint selection. The atom file is assigning data to joints, causing them to fly away. Re-export your animation data without the joints selected and re-import into the rig.

Hands are Flying Back to the Origin

At this point, it's likely a constraint issue. Go back to your original file with animation in it and **REMOVE ALL CONSTRAINTS.** Uncheck constraints on export. Re-import the animation. If it still isn't working, remove and reload the reference, and then re-import the animation.

Rig is Not Taking Animation:

While this is a known issue, I don't currently know what's causing it. If this is happening to you, try to use…

AnimExport

Very similar to ATOM, animExport is a plugin you'll need to load into Maya (it's already included with the software; no need to download anything new.

1. Open the file with the animation on it. Make sure you cannot select geometry or joints.
2. Select **the allAnim.**
3. File >> Export Selection [ ] (hit the option box.)
4. Select file type: animExport.
5. Hierarchy: Below.
6. Make sure to tell it to take **only the frames you want.** Time range is important with this method.
7. Open the clean file. Reference in the rig.
8. **MOVE YOUR TIME SLIDER IN THE TIMELINE TO THE FIRST FRAME OF THE ANIMATION.** Know that this will override any other keys in the file that are competing with the imported keys.
9. Select the allAnim on the new referenced rig.
10. File >> import >> [whatever you named your animExport file]
11. The character should now move to the desired location.
12. **This method cannot preserve constraint data.**