

Importing/exporting with 3DS max models

Note: for this course it's not required to create your own models! You can use the two default Vizard avatars or you can use the avatar I made (see *Blackboard IUXE - Course Documents > Vizard Related Files*). However, if you have access to 3Ds max models or can create one on your own, this small explanation may be of use.

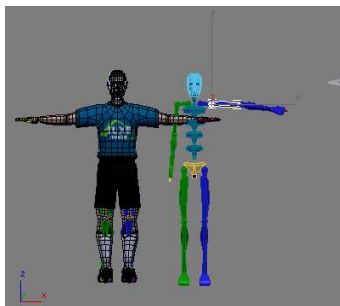
Tools you will need:

- 3DS Max 2009 (trial version available at: <http://usa.autodesk.com/adsk/servlet/mform?id=10083915&siteID=123112>)
- Cal3D exporter for 3DS Max (2009): <http://www.worldviz.com/download/index.php?id=9>

For this example I edited a free 3D model and added a 'biped'. A good tutorial on how to attach the skeleton (for animation) to your model can be found here:

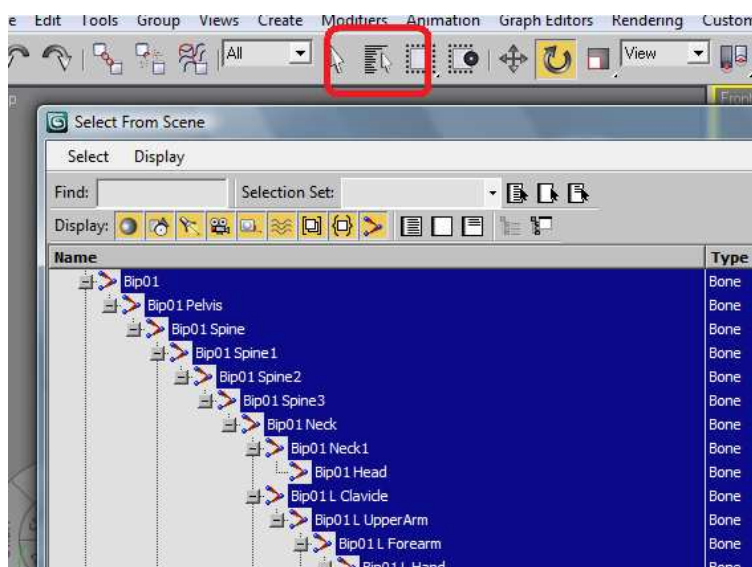
<http://masdsn.proboards67.com/index.cgi?board=tuts&action=display&thread=3805>

This will be the starting point of this small tutorial.



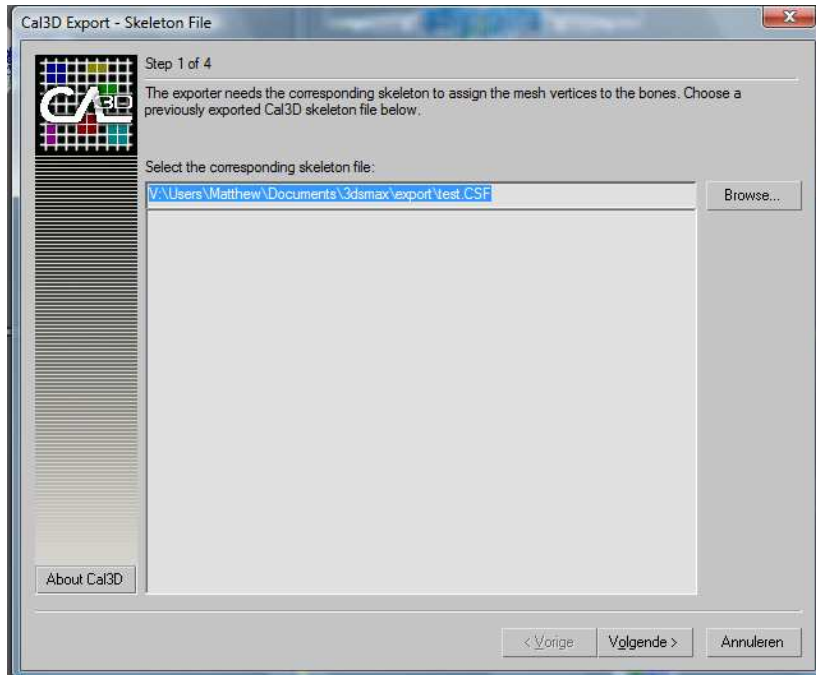
Exporting

First you have to export the skeleton of your avatar. You can do this by selecting the biped/skeleton parts. Don't select parts of the mesh.



When done, go to file > export.
Save this as a Cal3d Skeleton file.

Next, select the mesh (or one part of the mesh, if there is more than one). This can also be done by the 'select by name' button.
Once you're done, go to file > export. This time save it as cal3D Mesh file. A new window will appear and you will have to browse for the skeleton file you created in the previous step.



If you have selected parts of the skeleton, 3DS max might crash, so be careful.
Repeat this for all the other meshes in your model.

Materials can also be exported. For this to work you will have to r(e)name the materials to material [0], Material [1], material [2], etc.

If done correctly, you will end up with a small collection of files. All that is left are the animations.

Importing animations

For the IUXE example avatar I used MoCap animations which can be downloaded for free from various sites.

The downside is that most of them need to be converted to either .bip or .bvh files in order for 3Ds Max to read them.

A great resource is the following site:

<http://mocap.cs.cmu.edu/> A converter to convert these files is available here:
<http://vipbase.net/amc2bvh/>

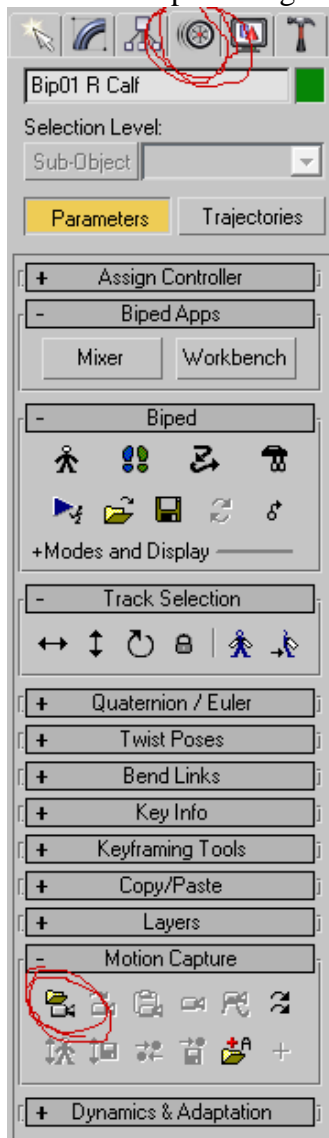
.BIP animations can be found here, these are the easiest to use. However, selection is limited. There may be many more sites with .bip files, but I am not aware of them.

http://movlab.ulusofona.pt/cms/index.php?option=com_content&view=article&id=156&Itemid=104&lang=pt

If you really need to use a bvh file, you have to do the following.

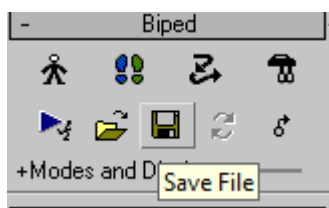
bvh files in 3ds max.

Open a new file and go to Create > Systems > Biped.
Select the Biped and go to the 'motion' tab.



Under 'motion capture' load motion capture file. Here, load the bvh file.

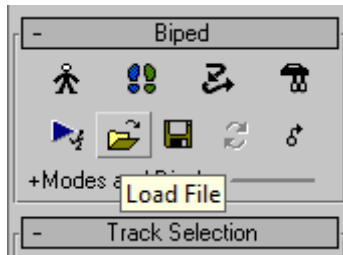
Now you have to save this as a .bip file for later use. Do this by selecting 'save' under 'Biped':



It is assumed that the biped created here is the same as the one in the model you will be using.

.bip files in 3ds max.

This is pretty straightforward. Select the biped (or a part of it) and go to the 'motion' tab. Now select 'load' under 'biped':



Select the .bip file in the next window. If everything is okay, the animation will be loaded. It is possible that you will see an error. Some of the animations don't have the correct tags needed in 3DS max.

Exporting animations

Now make sure the biped is not in 'figure mode' (also under 'biped' on the 'motion' tab). Now, again, go to file > export and save as a cal3D animation.

You will now have one animation. To add others, load the new .bip and export again.

Creating the .cfg file

The .cfg file is actually a text file which specifies the separate files needed for your avatar. You can edit this file with notepad.

```
#####  
#  
# Cal3d cfg File  
#  
#####  
path=iuxe/  
scale=0.01  
flip_texture = 1  
  
##### Skeleton #####  
skeleton=vizardava.CSF  
  
##### Meshes #####  
mesh=vizardavamesh.CMF  
  
##### Animations #####  
animation=vizardanimation.CAF  
  
##### Materials #####  
material=vizardavamaterials.CRF
```

You can now load this .cfg file in Vizard.

If you are facing weird texture problems, try changing the line

flip_texture = 0

to flip_texture = 1

