

Monday, February 22, 2010
14:35

Cal3D Export

Preparation

- 3Ds MAX Design 2010
- Cal3D Exporter (for max 6 to 2010)
- Worldviz Vizard 3

- 3D Model with biped skeleton

Overall

With **Cal3D Exporter**, **3Ds MAX** can export **3D Models** into **Cal3D files**. These **Cal3D files** can be imported by **Vizard**.

Cal3D files have 5 parts:

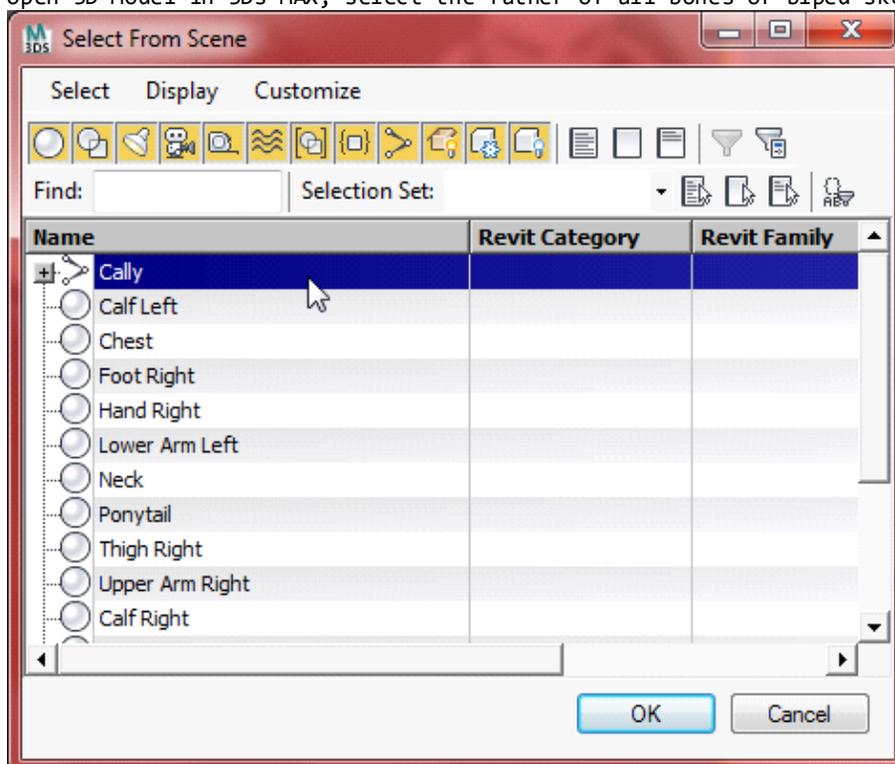
```
configure file (.cfg)
skeleton file (.csf)
mesh file (.cmf)
material file (.crf)
animation file (.caf)
```

The last 4 parts (**csf cmf crf caf**) are exported by **3Ds MAX** with **Cal3D Exporter**. The first part (**cfg**) is created by use self.

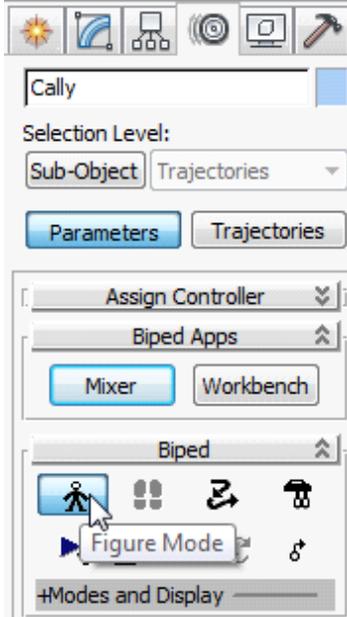
Export as **skeleton file (.csf)**

Skeleton file must be exported FIRST.

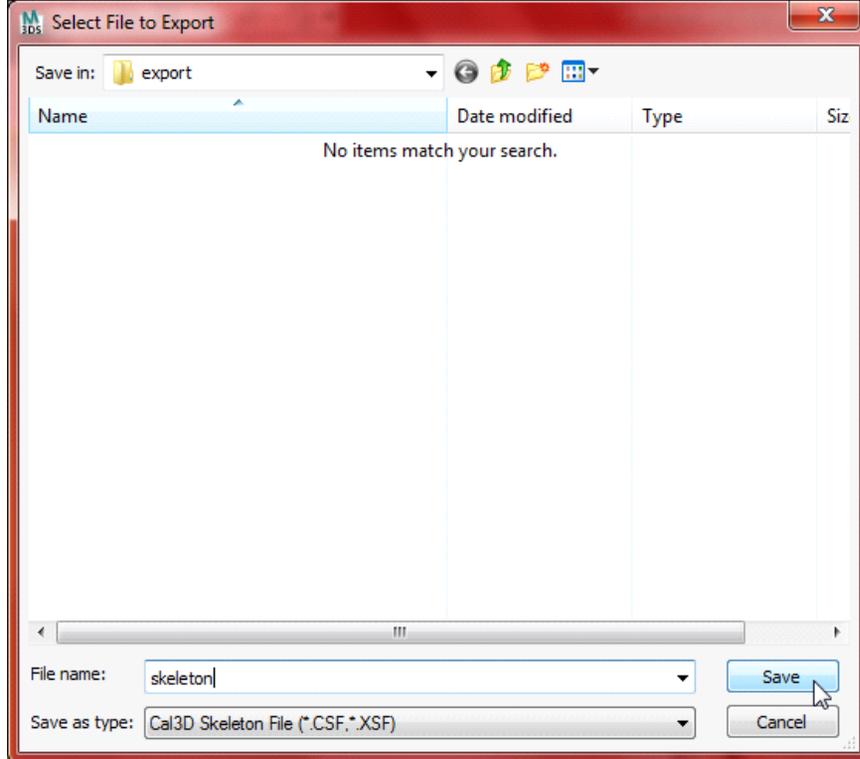
Open 3D Model in 3Ds MAX, select the father of all bones of biped skeleton:



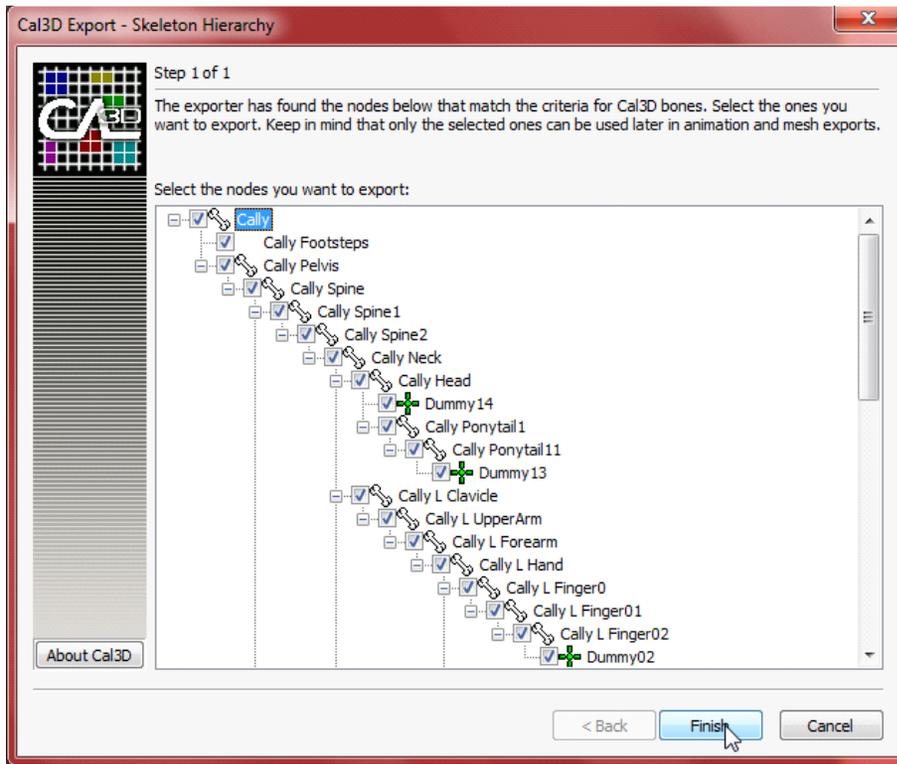
Go to Motion tab and turn on Figure Mode:



Export as Cal3D Skeleton File:



Select all and click Finish:

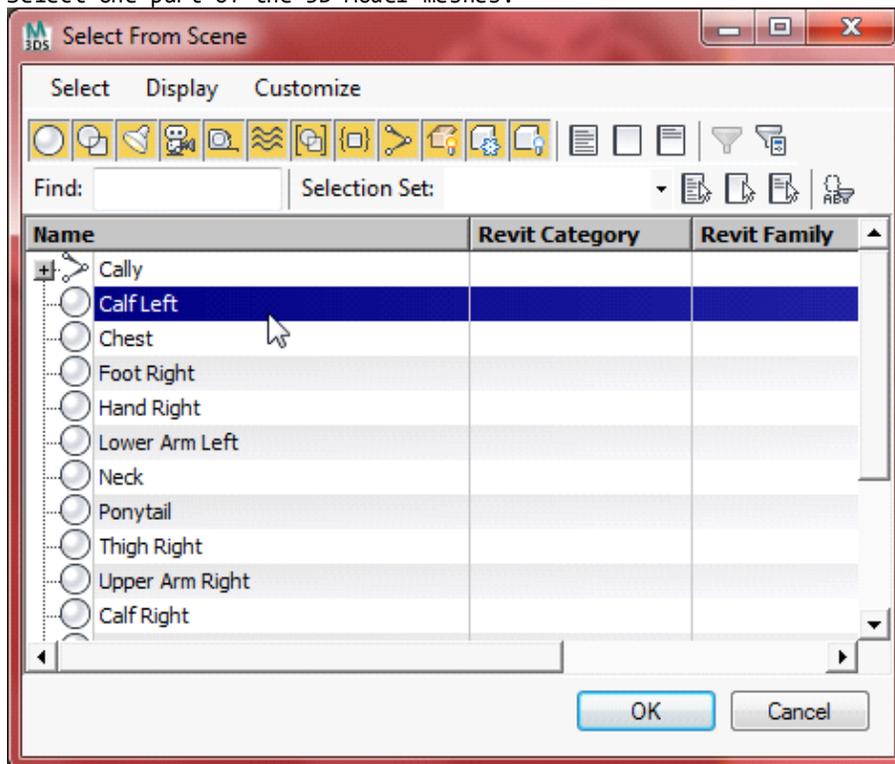


Export as mesh file (.cmf)

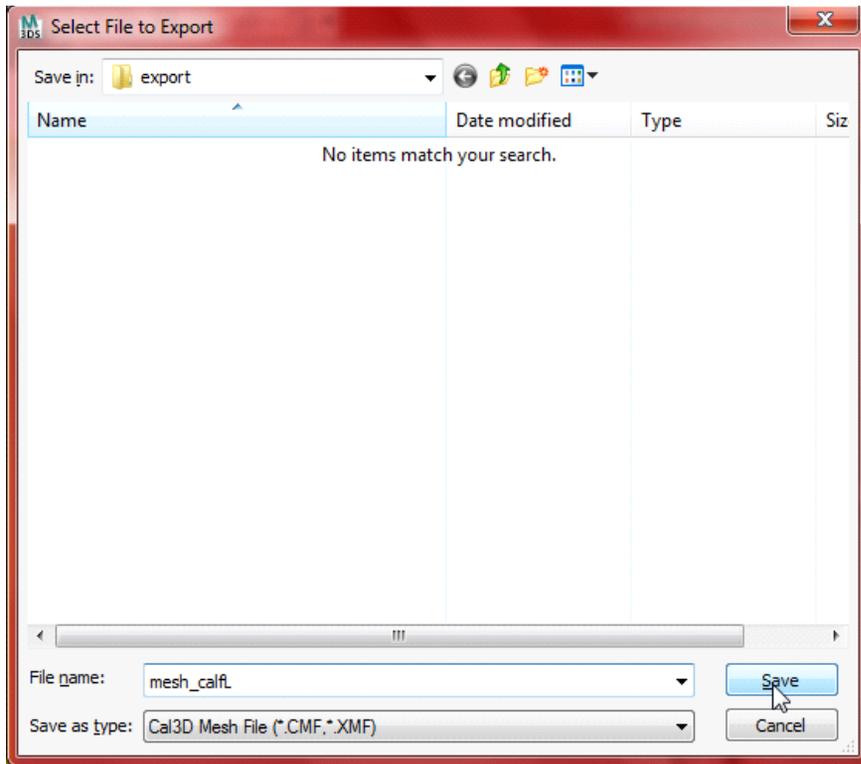
When export mesh file, 3D Model MUST keep in Figure Mode.

One mesh file can not contain too many polygons. If the 3D Model is too complicated, try to divide it into several parts.

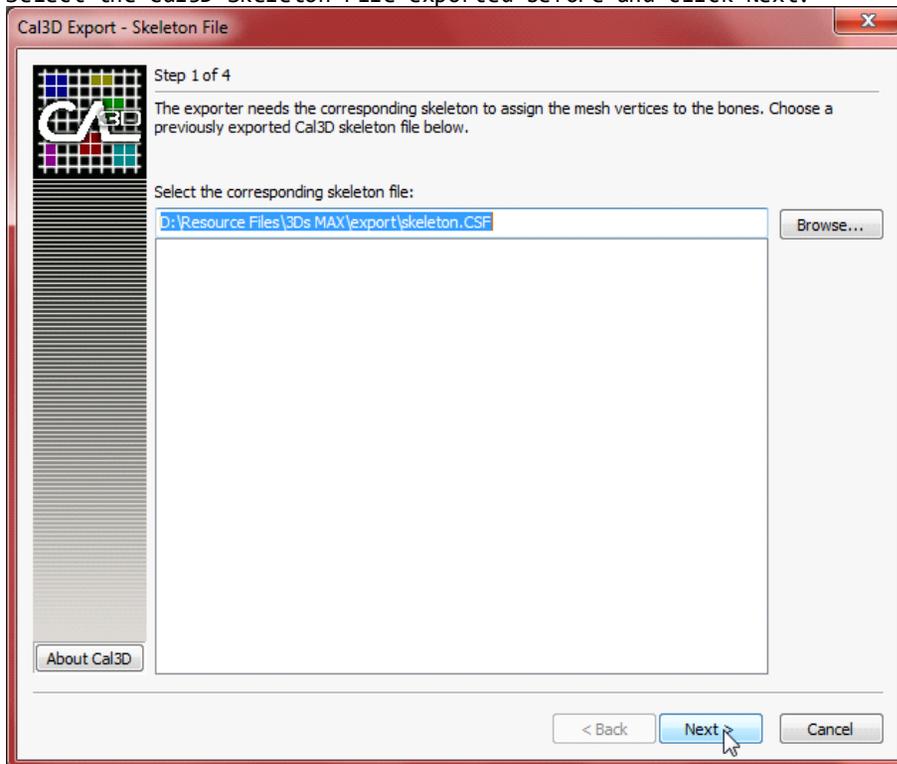
Select one part of the 3D Model meshes:



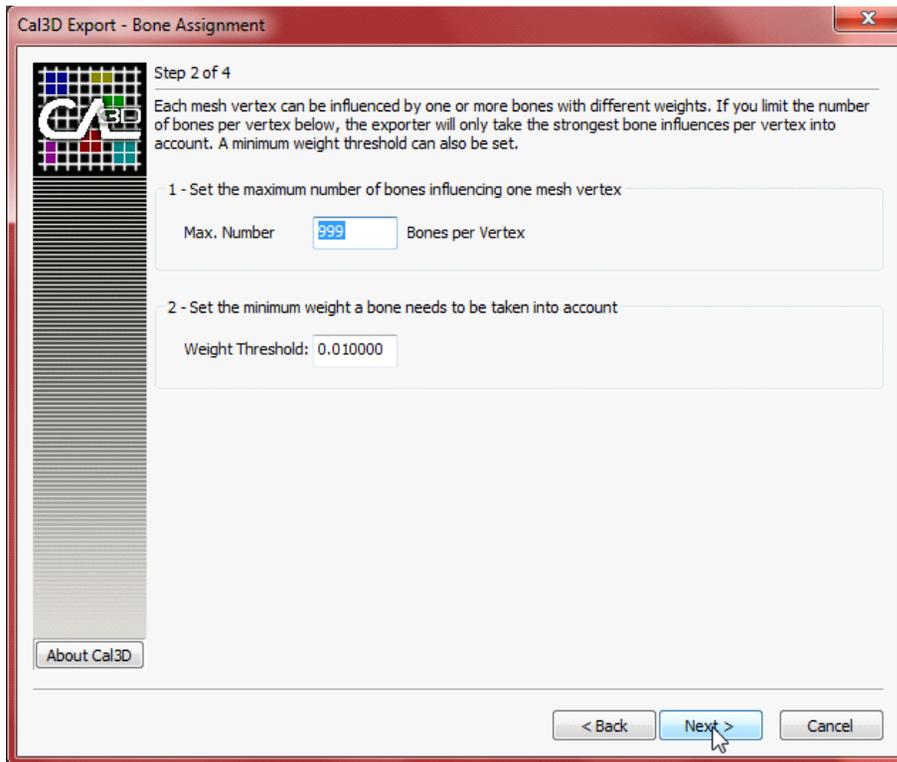
Export as Cal3D mesh file:



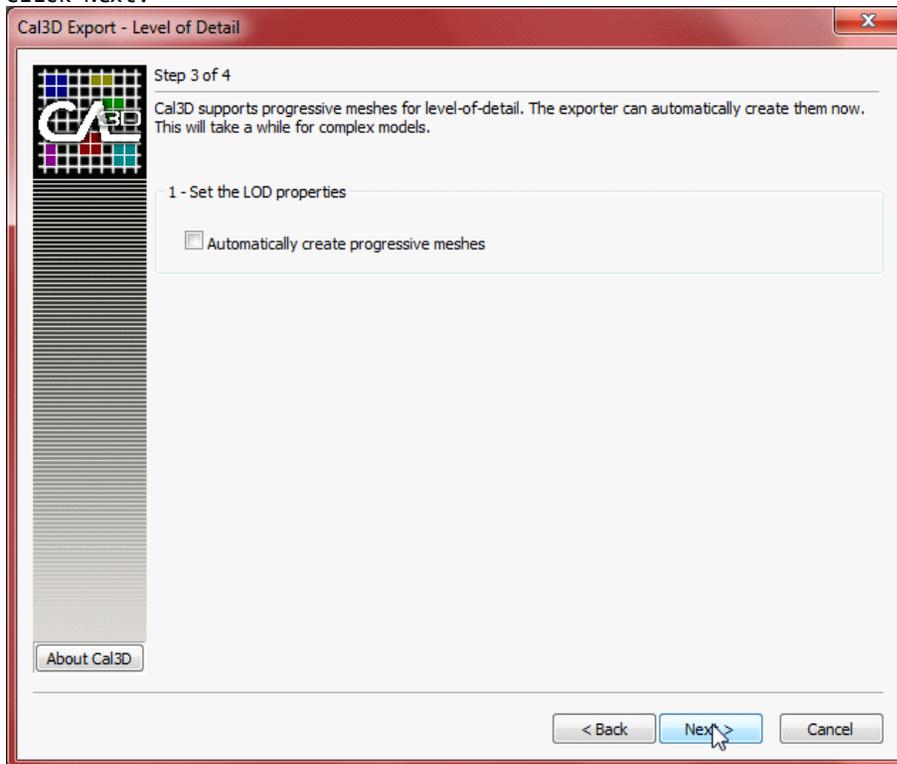
Select the Cal3D Skeleton File exported before and click Next:



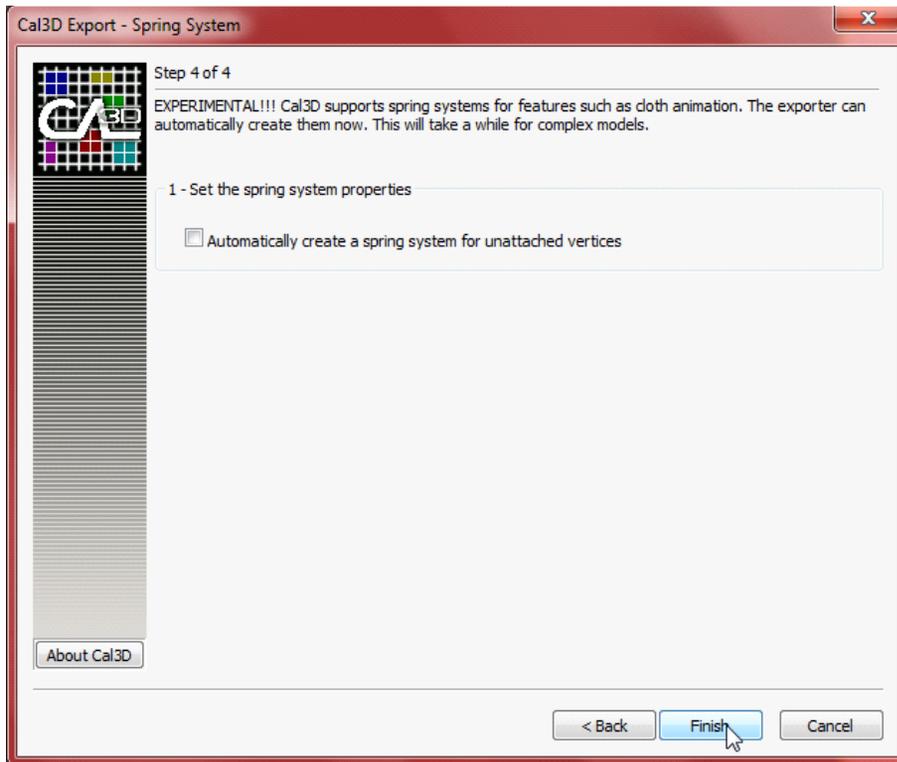
Leave all the data in default and click Next:



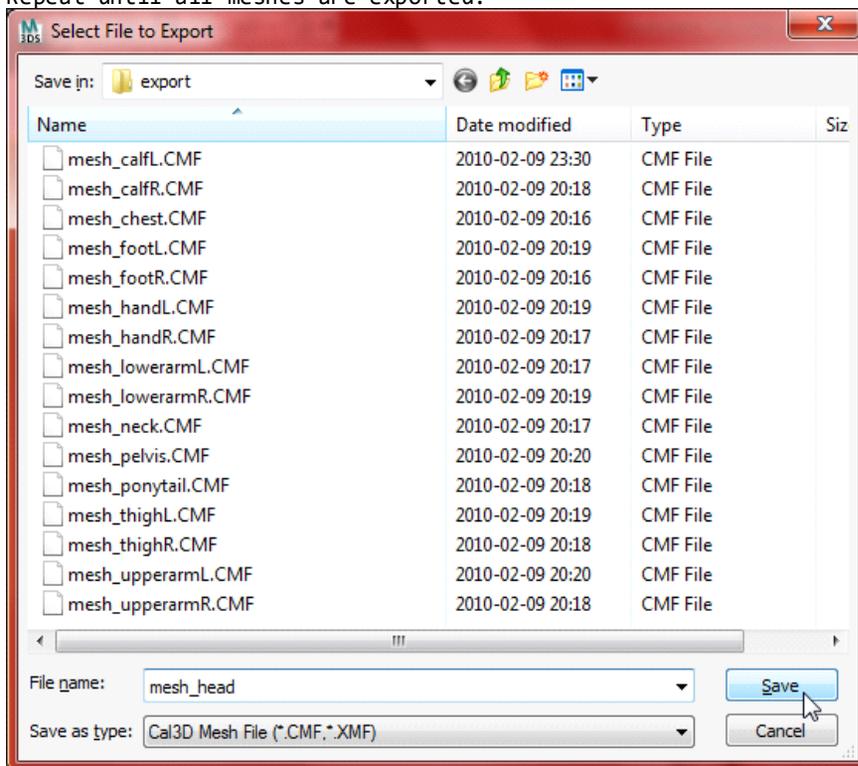
Click Next:



Click Finish:



Repeat until all meshes are exported:



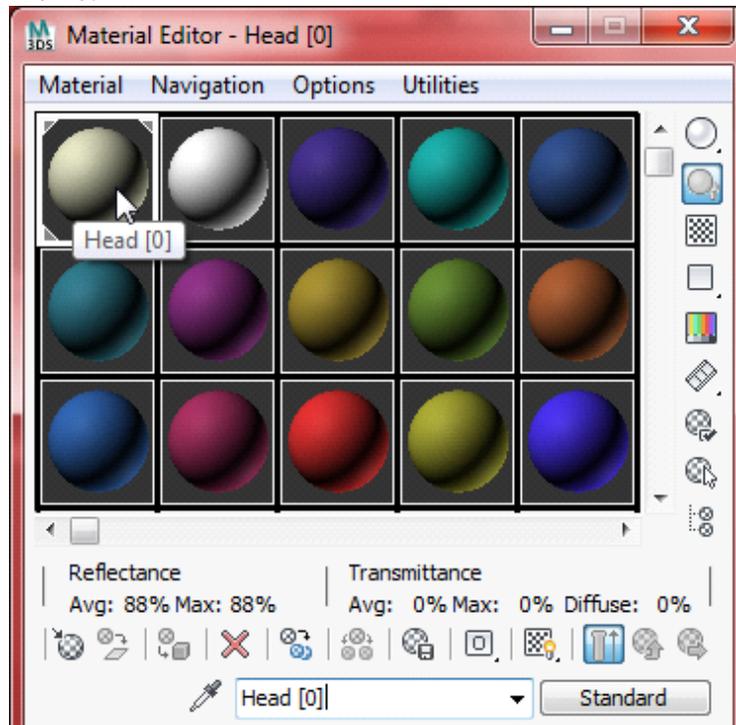
Export as material file (.crf)

Rename all the materials used by the 3D Model as following format:

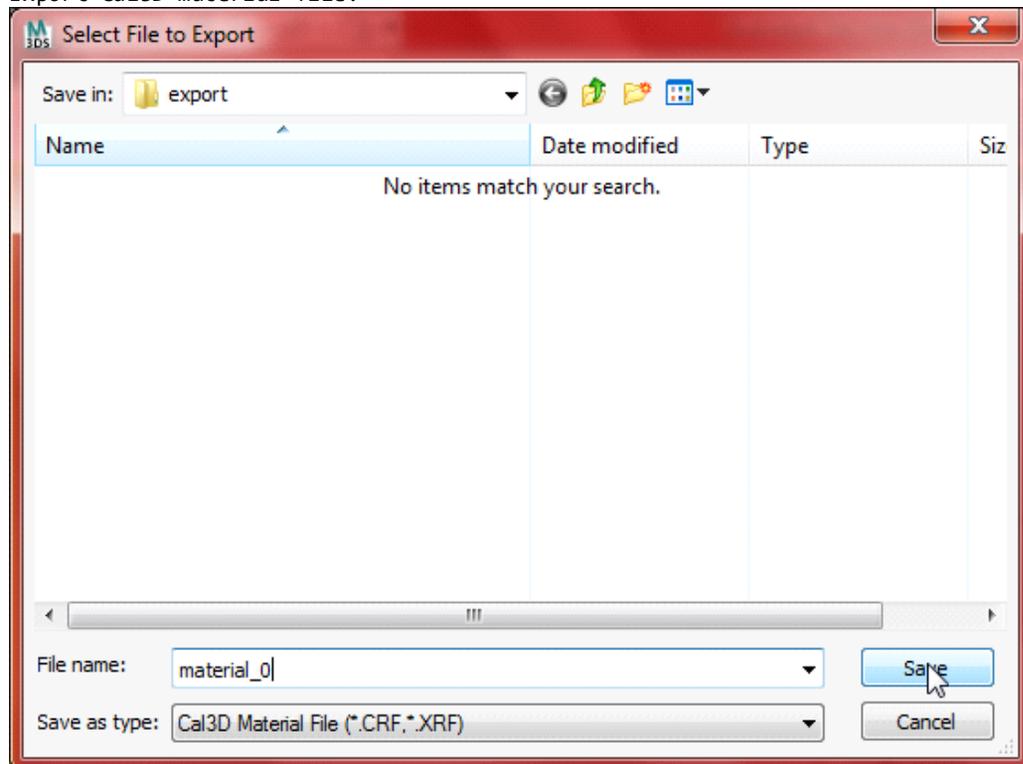
```
MaterialName [0]
MaterialName [1]
... ..
MaterialName [N]
```

MaterialName can be any word, but must take a bracket with a serial number begin

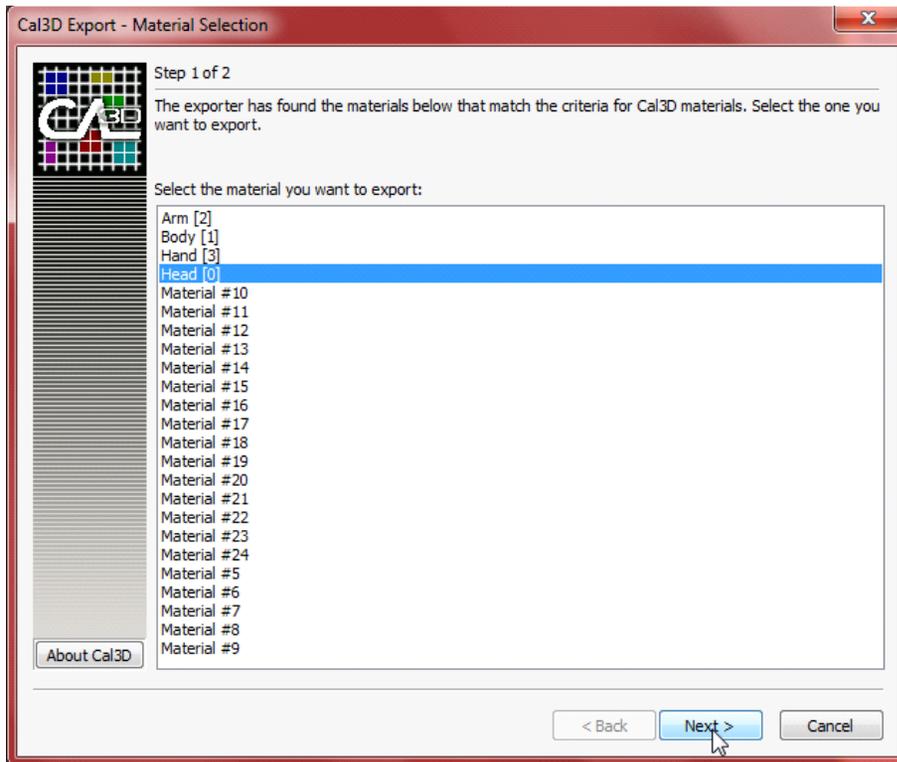
from 0.



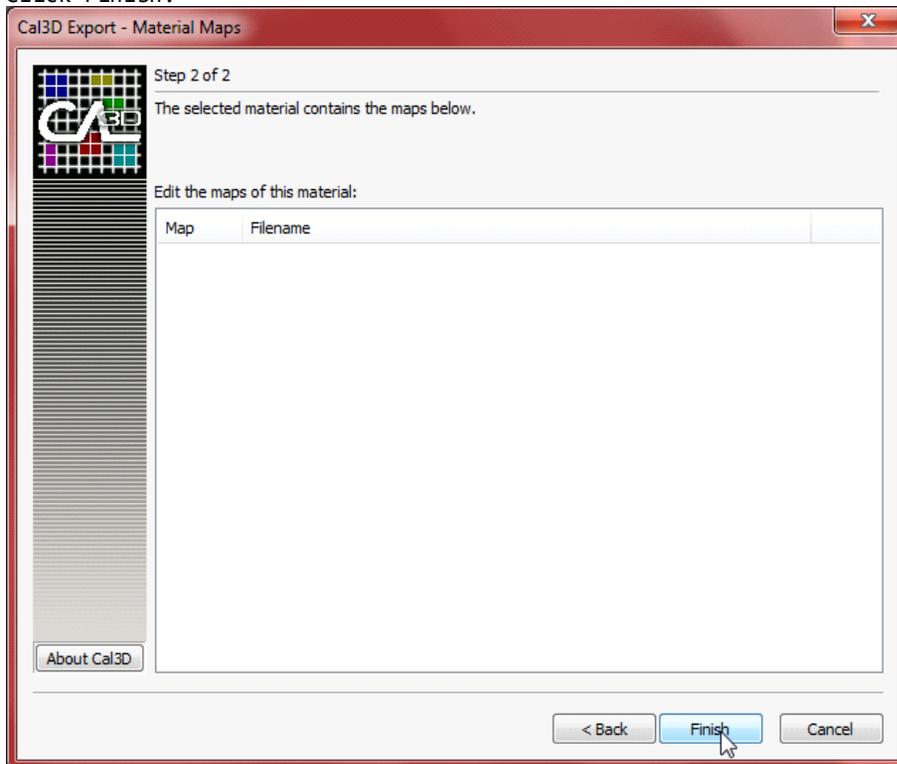
Export Cal3D material file:



Select one of the materials:



Click Finish:



NOTE: try to only use Standard material for the 3D Models.

NOTE: strongly recommend put 3D Model File (.max, .3ds, .obj, ...) and the Texture File (.jpg, .tga, .bmp, ...) in the same folder with exported Cal3D files.

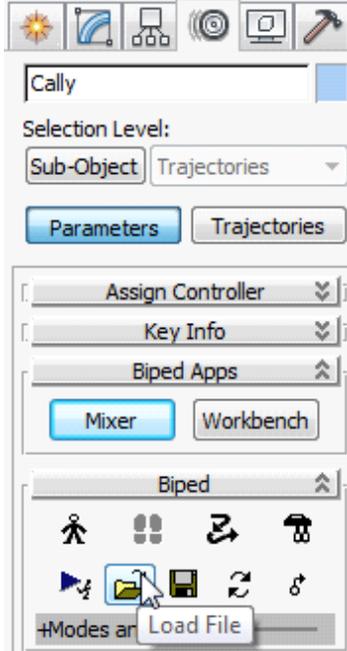
NOTE: in Cal3D configure file, the material parts MUST quoted in order by the MaterialName [0], MaterialName [1], ..., MaterialName [N].

NOTE: if the material shows upside down in Cal3D Model, try to check and change the value of "flip_texture" in Cal3D configure file (0 or 1).

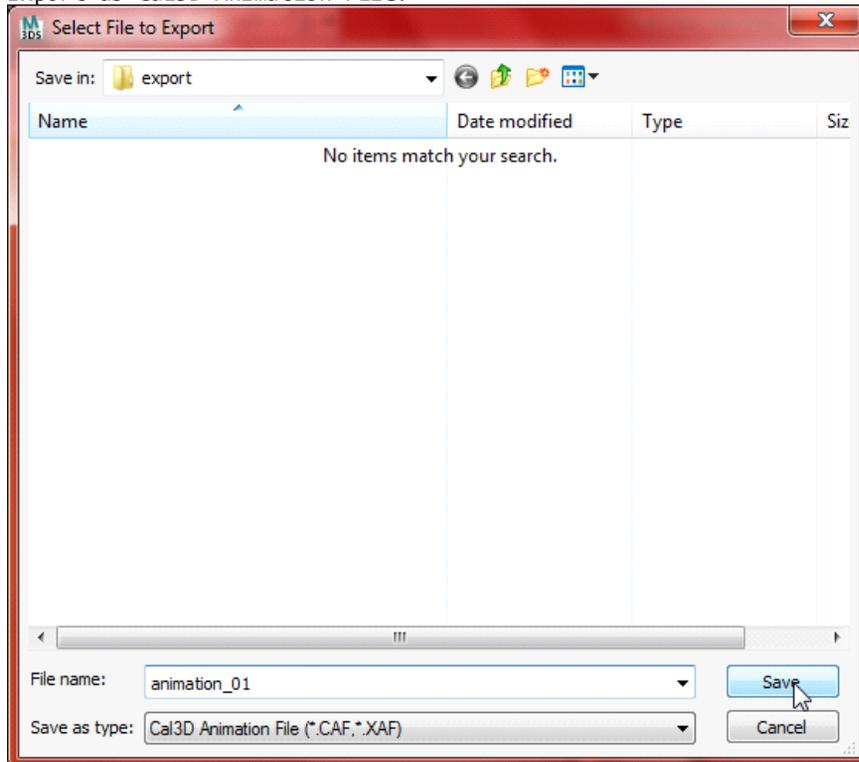
Export as animation file (.caf)

When export animation file, 3D Model MUST NOT in Figure Mode.

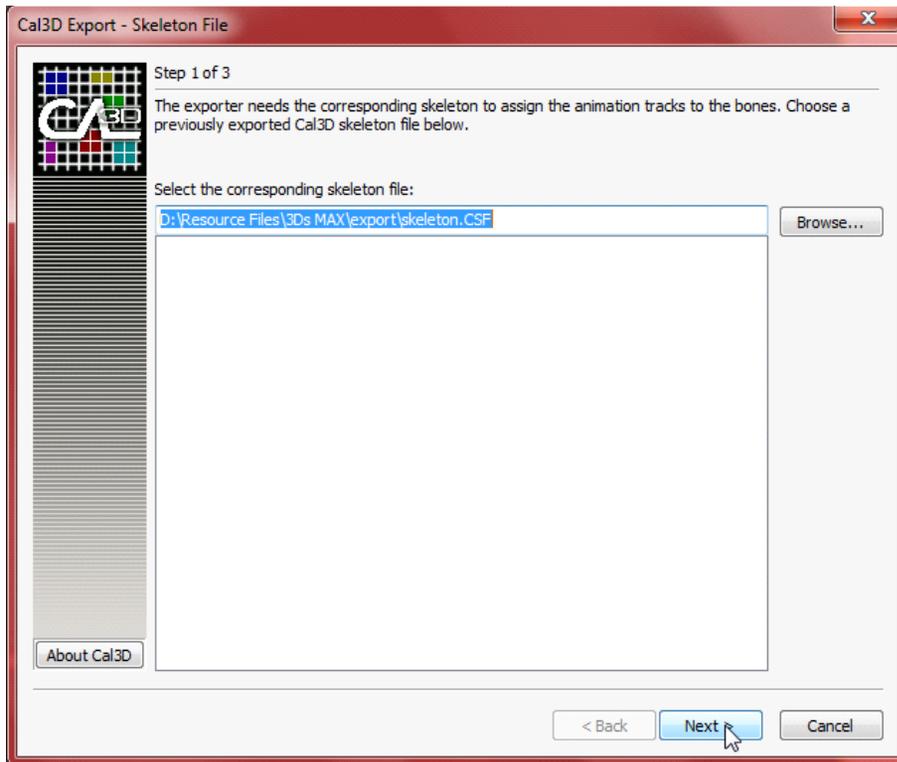
Turn off Figure Mode and load a Mocap File (.bip):



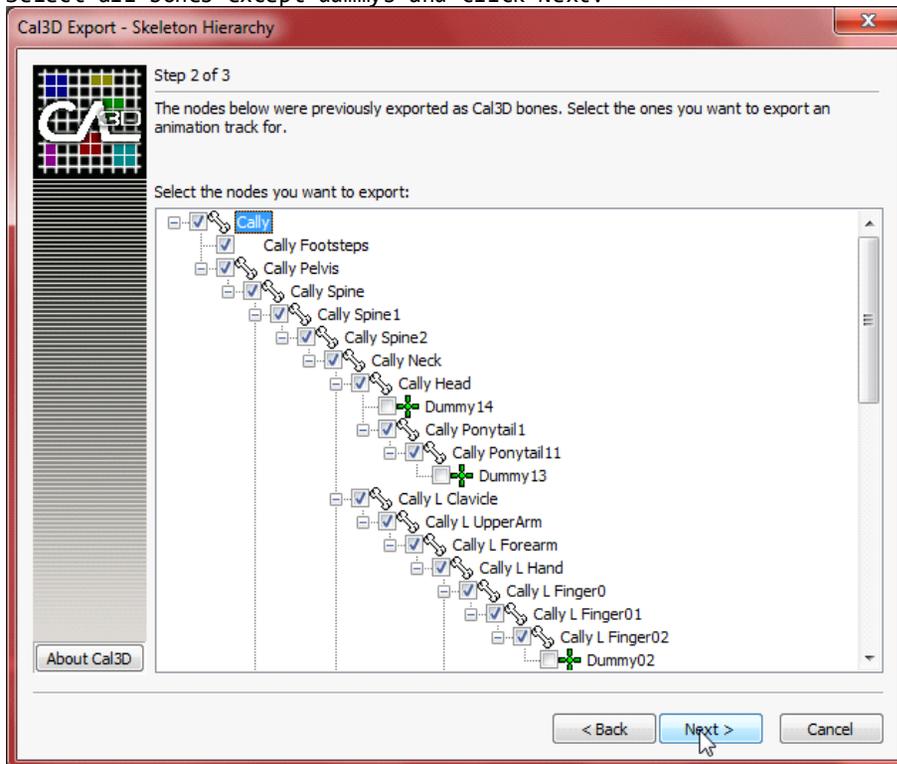
Export as Cal3D Animation File:



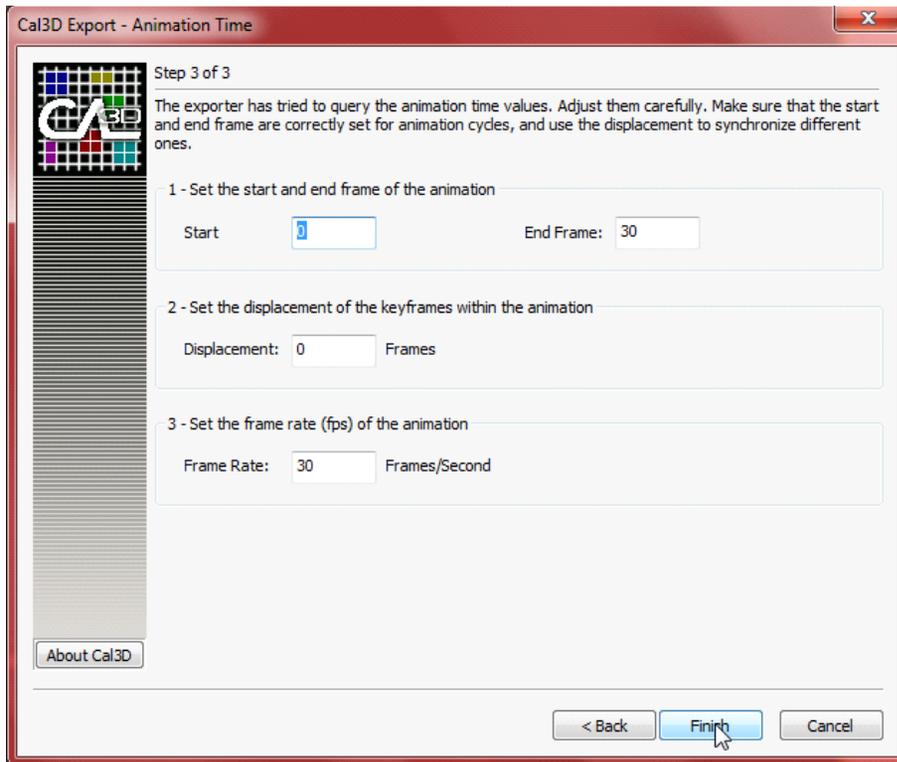
Select the Cal3D Skeleton File exported before and click Next:



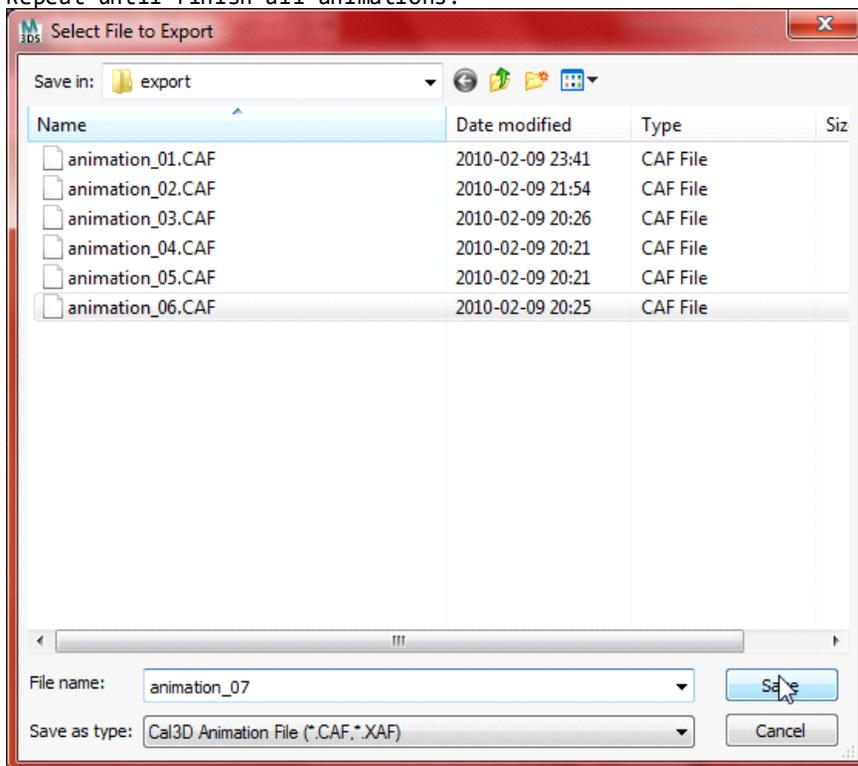
Select all bones except dummies and click Next:



Set animation parameters and click Finish:



Repeat until finish all animations:



Create a **configure file** (.cfg)

The **configure file** is written manually. Here is a sample:



demo

```

#----- aquCHAOS -:
# Cal3D cfg file demo
#-----:
#
#-----:

#-----:
# basic setting
#-----:
path = Cal3D_folder/
scale = 0.01
flip_texture = 1

#-----:
# Cal3D skeleton file
#-----:
skeleton=skeleton.CSF

#-----:
# Cal3D meshes files
#-----:
mesh=mesh_calfl.CMF
mesh=mesh_calfr.CMF
mesh=mesh_chest.CMF
mesh=mesh_footl.CMF
mesh=mesh_footr.CMF
mesh=mesh_handl.CMF
mesh=mesh_handr.CMF
mesh=mesh_head.CMF
mesh=mesh_lowerarmL.CMF
mesh=mesh_lowerarmR.CMF
mesh=mesh_neck.CMF
mesh=mesh_pelvis.CMF
mesh=mesh_spinelower.CMF
mesh=mesh_spineupper.CMF
mesh=mesh_thighL.CMF
mesh=mesh_thighR.CMF
mesh=mesh_upperarmL.CMF
mesh=mesh_upperarmR.CMF

morph=morph_00.CMF
morph=morph_01.CMF
morph=morph_02.CMF
morph=morph_03.CMF
morph=morph_04.CMF

#-----:
# Cal3D animation files
#-----:
animation=animation_00.CAF
animation=animation_01.CAF
animation=animation_02.CAF
animation=animation_03.CAF
animation=animation_04.CAF

#-----:
# Cal3D material files
#-----:
material=material_00.CRF
material=material_01.CRF
material=material_02.CRF
material=material_03.CRF
material=material_04.CRF

#-----:
# Vizard special setting
#-----:
head_bone = Bip01 Head
neck_bone = Bip01 Neck

```

