

Course: 3D Design
Title: Configuring Blender (version 2.46) for exporting models to Google Earth (Windows and MAC)
Dropbox File: ColladaBlender1.4v03.108.zip
Blender: Version 2.46
Level: Intermediate
Author: Neal Hirsig (nhirsig@tufts.edu)

Configuring Blender (version 2.46) for exporting models to Google Earth (Windows and MAC)

Collada 1.4 version 0.3.108:

Blender version 2.45 and 2.46 for both Windows and MAC contain a Collada 1.4 plug-in for exporting models in .dae (Digital Asset Exchange) format. Both Blender v2.45 and v2.46 use the Version 0.3.159 Collada 1.4 plug-in. This version of Collada plug-in will export models for import into Google Earth BUT it will NOT export any UV textures. If your model consists of only RGB colored materials (no textures) you can use the existing Version 0.3.159 plug-in. HOWEVER, if your model contains UV mapped image textures you must substitute the Version 0.3.159 plug-in files with an earlier Version 0.3.108 set of files.

Go the Collada Plug-in for Blender web site:
<http://colladablender.illusoft.com/cms/>

Collada 1.4.0 Plug-in for Blender \

Click on the “Download” link and download the Version 0.3.108 file.

Version 0.3.108	Features
	Skinned Armature Export (no animations yet)
September 15 , 2006	Solid Armature Import
	Bugfixes
	Bugfix 0000060 : Transforms of nested nodes are not correct

As an alternative, you can use the ColladaBlender1.4v03.108.zip file located in the Kukulkan Pyramid PDF Tutorial section of this course site.

Create a new folder on your Desktop called “collada”. Open the downloaded zip file and extract the contents to this new Desktop folder. The Desktop collada folder should now have 2 files (colladaExport14.py and colladaImport14.py) and a folder called bpymodules. The bpymodules folder contains a subfolder called colladaImEx. The colladaImEx folder contains 9 files (__init__.py changelog.txt collada.py cstartup.py cutils.py helperObjects.py logo.png translator.py and xmlUtils.py).

Google Earth:

Before going through the process of configuring Blender for exporting models to Google Earth make sure you have the latest version of Google Earth installed on your computer. At the time of this writing, the latest Google Earth version is 4.3.7204.0386 (beta) for both Windows and MAC.

Windows users follow the installation directions after downloading. MAC users drag the downloaded GoogleEarth.app file to their “Applications” directory.

Open Google Earth and make sure it is operating normally. General directions for navigating through Google Earth can be found in the “Basic Google Earth” video tutorial located on this Blender course site (<http://www.gryllus.net/Blender/3D.html>).

Configuring the Windows Blender Version for Exporting Models to Google Earth:

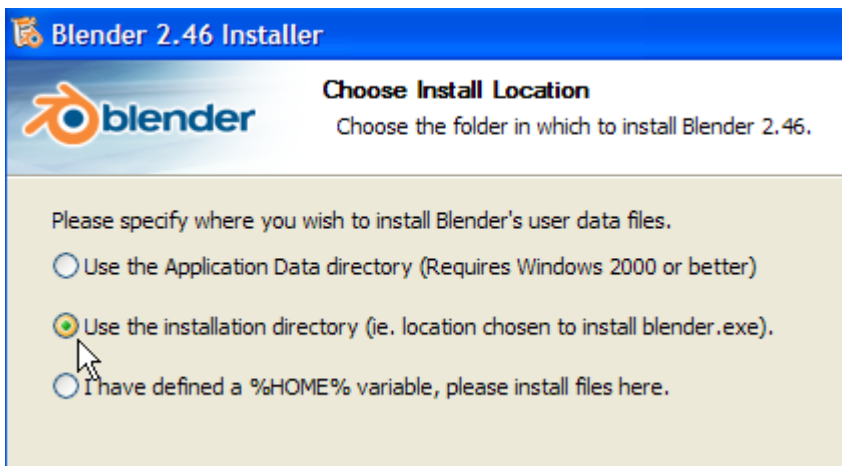
The process for configuring the Windows version 2.46 (or 2.45) for exporting models to Google Earth is fairly straight-forward. We need to replace some Blender installed files with the download files from the collada Desktop folder.

Download Blender version 2.46 from the Blender site (<http://www.blender.org/>).

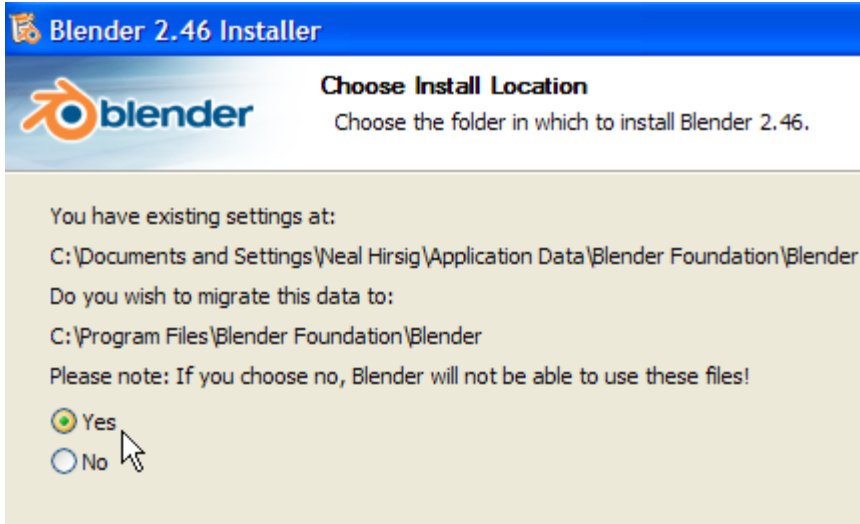
During the installation process you will be asked for the location to place the Blender files. Accept the default C:\ProgramFiles\Blender Foundation\Blender location.



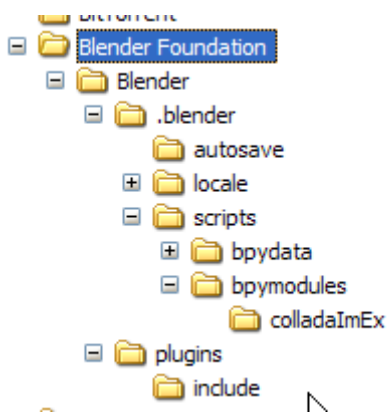
You will also be asked for the location of the Blender data files. Select “Use the installation directory”



If you are installing Blender 2.46 over an existing earlier Blender version you may see a dialog box during the installation asking if you want the existing data files transferred to the installation directory. Answer “Yes” to this request.

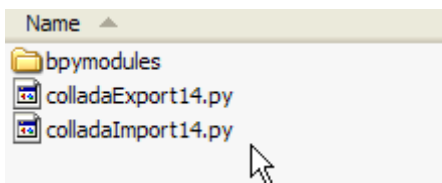


After the installation is complete open up your Windows file explorer. Your C:\ProgramFiles/Blender Foundation file structure should look like this:

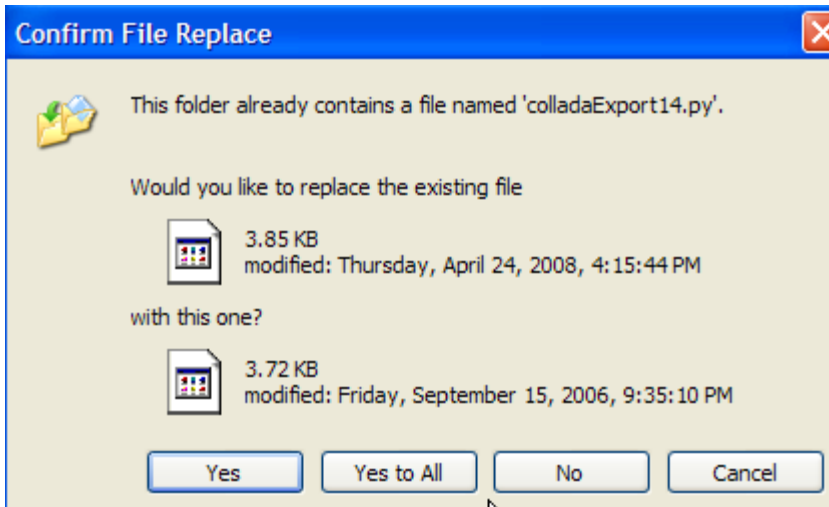


We now need to replace some Blender installed files with the download files from the collada Desktop folder.

Right-click your Desktop collada folder and choose “explore”. The file structure should look like this:



Drag the colladaExport14.py and the colladaImport14.py files from the collada folder to the Blender Foundation / Blender / .blender / scripts folder. A dialogue box asking if you want to replace the existing file(s) will appear. Answer “Yes” to these questions.



Note: On Windows Vista computers the dialog box will be different (Move and Replace). You will also have to confirm permissions to make this file replacement.

After replacing the two files your Blender Foundation / Blender / .blender / scripts folder should now contain the following files (note the modification dates):

	colladaExport14.py	4 KB	PY File	9/15/2006 9:35 PM
	colladaImport14.py	4 KB	PY File	9/15/2006 9:35 PM

Double-click the bpymodules folder in your Desktop collada folder. This folder contains a sub-folder called colladaImEx. Double-click this folder. You should now see the 9 files contained in this folder:

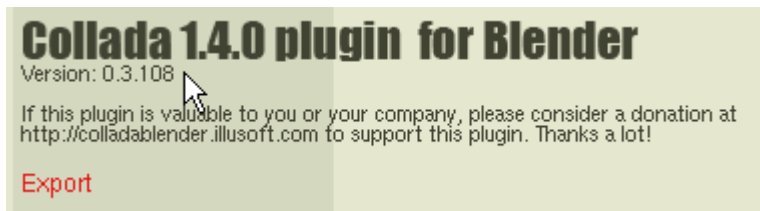
Name	Size	Type
init.py	0 KB	PY File
changelog.txt	6 KB	Text Document
collada.py	107 KB	PY File
cstartup.py	19 KB	PY File
cutils.py	9 KB	PY File
helperObjects.py	8 KB	PY File
logo.png	5 KB	PNG Image
translator.py	100 KB	PY File
xmlUtils.py	6 KB	PY File

Drag these 9 files from the Desktop / collada / bpymodules / colladaImEx folder to the Blender Foundation / Blender / .blender / scripts / bpymodules / colladaImEx folder.

Answer “Yes” to any dialogue box questions about replacing these files.

You should now have completed the Blender configuration for Windows which will allow you to export .dae files (including the UV texture information) to Google Earth.

To test that the proper files have been replaced, open Blender v 2.46. Go to files / Export / Collada 1.4 (.dae). This will display the Collada Export settings. The top section should indicate that the plug-in version is 0.3.108

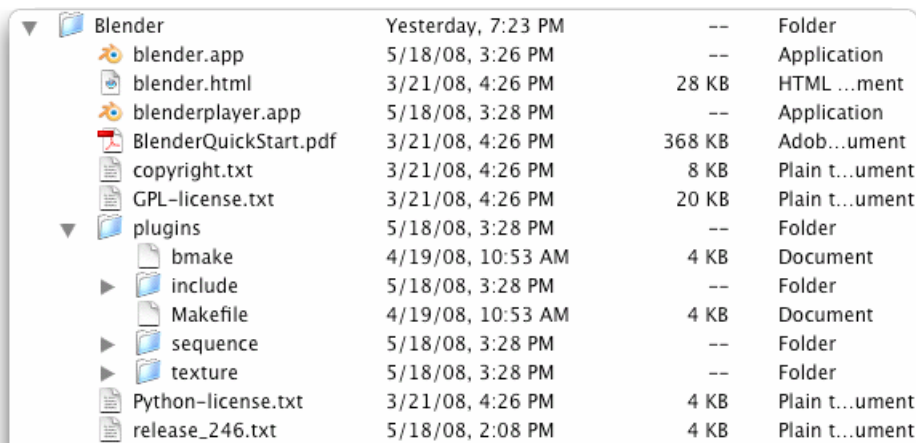


Configuring the MAC Blender Version for Exporting Models to Google Earth:

The process for configuring the MAC Blender version 2.46 (or 2.45) for exporting models to Google Earth is a bit complicated. The reason for this is that the Python script files that need to be replaced are located (hidden) inside of the Blender.app file on the MAC.

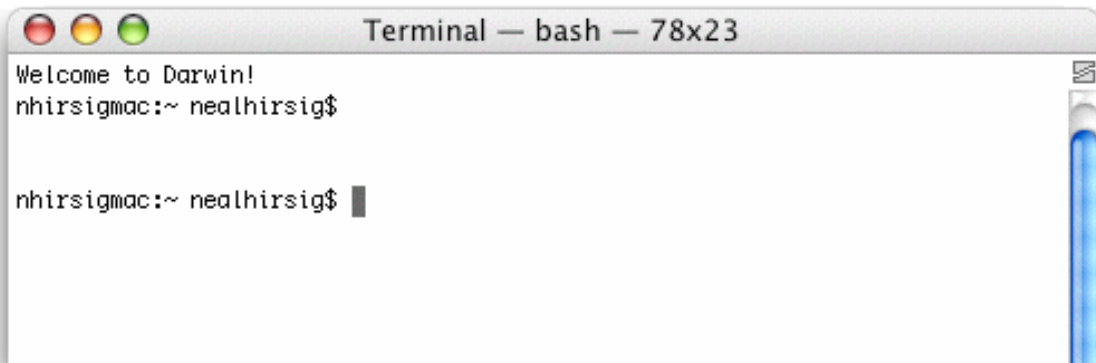
Download Blender version 2.46 from the Blender site (<http://www.blender.org/>). Make sure you download the “Blender 2.46, PowerPC, Python 2.5” version or the Blender 2.46, Intel, Python 2.5” version (depending on your MAC) and NOT the Blender 2.46, PowerPC, Python 2.3” version

Normally, when you install Blender on a MAC you simply drag the downloaded .dmg file to your Applications directory, which installs it as a disk image. I suggest, however that instead you create a new folder called “Blender” in your Applications directory. Double-click the .dmg file (which will display all of the disk image files) and copy them to your new Blender folder. Your Blender folder (located in the Applications directory) should now look something like this:



We now need to replace some of the hidden files inside the blender.app file with the files downloaded from the Collada/Blender site that should be located in a folder called

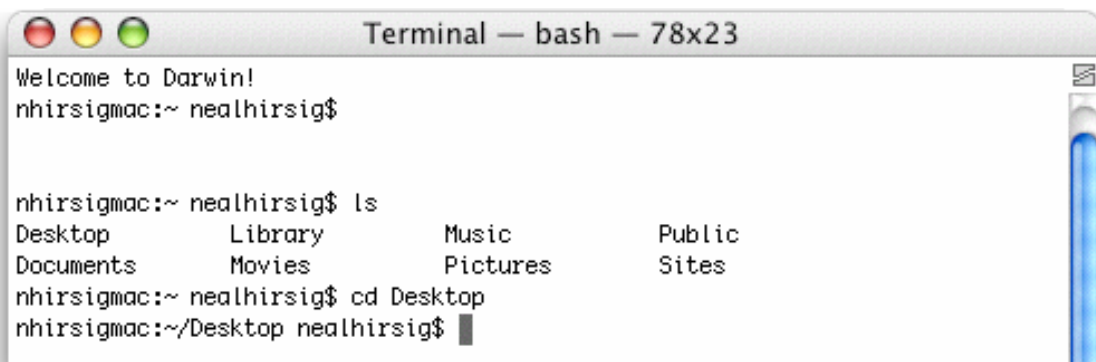
“collada” on your desktop. To do this we need to access the MAC terminal. Go to your Applications / Utilities directory and double-click on the terminal.app file. This will display your MAC’s Unix terminal.



By default your current directory will be in the “Users” directory. Type in: ls then hit enter. This will “list” the folders in your Users directory.



Type in cd Desktop then hit enter. This will change your current directory to the Desktop directory. (Note: the terminal app is case sensitive)



Type in cd collada. This will change your current directory to the new collada folder you created that contains the version 0.3.108 collada Python files.

```
Terminal — bash — 78x23
Welcome to Darwin!
nhirsigmac:~ nealhirsig$

nhirsigmac:~ nealhirsig$ ls
Desktop      Library      Music        Public
Documents    Movies       Pictures     Sites
nhirsigmac:~ nealhirsig$ cd Desktop
nhirsigmac:~/Desktop nealhirsig$ cd collada
nhirsigmac:~/Desktop/collada nealhirsig$
```

Type ls then hit enter. This will list all of the files and folders in your collada folder. Note there are one folder (bpymodules) and 2 files (colladaExport14.py and colladaImport1.4.py)

```
Terminal — bash — 78x23
Welcome to Darwin!
nhirsigmac:~ nealhirsig$

nhirsigmac:~ nealhirsig$ ls
Desktop      Library      Music        Public
Documents    Movies       Pictures     Sites
nhirsigmac:~ nealhirsig$ cd Desktop
nhirsigmac:~/Desktop nealhirsig$ cd collada
nhirsigmac:~/Desktop/collada nealhirsig$ ls
bpymodules      colladaExport14.py      colladaImport14.py
nhirsigmac:~/Desktop/collada nealhirsig$
```

Type cd bpymodules/colladaImEx then hit enter. This will change the current directory to the colladaImEx directory, which contains 9 files we need to copy.

```
Terminal — bash — 78x23
Welcome to Darwin!
nhirsigmac:~ nealhirsig$

nhirsigmac:~ nealhirsig$ ls
Desktop      Library      Music        Public
Documents    Movies       Pictures     Sites
nhirsigmac:~ nealhirsig$ cd Desktop
nhirsigmac:~/Desktop nealhirsig$ cd collada
nhirsigmac:~/Desktop/collada nealhirsig$ ls
bpymodules      colladaExport14.py      colladaImport14.py
nhirsigmac:~/Desktop/collada nealhirsig$ cd bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$
```

Type ls then hit enter. This will list the 9 files in the colladaImEx folder.



```
Terminal — bash — 78x23
Welcome to Darwin!
nhirsigmac:~ nealhirsig$

nhirsigmac:~ nealhirsig$ ls
Desktop      Library      Music        Public
Documents    Movies       Pictures     Sites

nhirsigmac:~ nealhirsig$ cd Desktop
nhirsigmac:~/Desktop nealhirsig$ cd collada
nhirsigmac:~/Desktop/collada nealhirsig$ ls
bpymodules      colladaExport14.py  colladaImport14.py
nhirsigmac:~/Desktop/collada nealhirsig$ cd bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ ls
__init__.py      cstartup.py         logo.png
changelog.txt    cutils.py           translator.py
collada.py       helperObjects.py    xmlUtils.py
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$
```

We now need to copy each of these files to a hidden folder inside the blender.app file. If you have set up your Blender folder in the Applications directory as suggested the path to the folder we need to copy these 9 files is:

`/Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx`

Type in `cp __init__.py`

`/Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx` then hit enter. This will copy the `__init__.py` file from the Desktop folder to the correct hidden folder in the blender.app file.

```
Terminal — bash — 78x23
Welcome to Darwin!
nhirsignac:~ nealhirsig$

nhirsignac:~ nealhirsig$ ls
Desktop      Library      Music        Public
Documents    Movies       Pictures     Sites
nhirsignac:~ nealhirsig$ cd Desktop
nhirsignac:~/Desktop nealhirsig$ cd collada
nhirsignac:~/Desktop/collada nealhirsig$ ls
bpymodules      colladaExport14.py  colladaImport14.py
nhirsignac:~/Desktop/collada nealhirsig$ cd bpymodules/colladaImEx
nhirsignac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ ls
__init__.py      cstartup.py         logo.png
changelog.txt    cutils.py           translator.py
collada.py       helperObjects.py    xmlUtils.py
nhirsignac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp __init__.py
/Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/
colladaImEx
nhirsignac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ █
```

Do the same thing with the remaining 8 files (Remember that the terminal.app is case sensitive)

```
Terminal — bash — 81x32
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ ls
__init__.py          cstartup.py          logo.png
changelog.txt        cutils.py             translator.py
collada.py           helperObjects.py     xmlUtils.py
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp __init__.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp changelog.txt /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp collada.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp cstartup.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp cutils.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp helperObjects.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp logo.png /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp translator.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp xmlUtils.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$
```

We next need to copy the colladaExport14.py and colladaImport1.4.py to the hidden “scripts” folder in the blender.app file. We will need to first change the current directory. Type in `cd ../../` then hit enter. The current directory is now Desktop / collada.

```
Terminal — bash — 73x13
Objects.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp logo.png /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp translator.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp xmlUtils.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cd ../../
nhirsigmac:~/Desktop/collada nealhirsig$
```

Type in `ls` then hit enter. This will list the 2 files (and the bpymodules folder) in the collada folder.

```
Terminal — bash — 73x13
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp logo.png /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp translator.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp xmlUtils.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cd ../../
nhirsigmac:~/Desktop/collada nealhirsig$ ls
bpymodules          colladaExport14.py    colladaImport14.py
nhirsigmac:~/Desktop/collada nealhirsig$
```

We now need to copy the colladaExport14.py and the colladaImport14.py files to a hidden folder (scripts) inside the blender.app file. If you have set up your Blender folder in the Applications directory as suggested the path to the folder we need to copy these 2 files is:

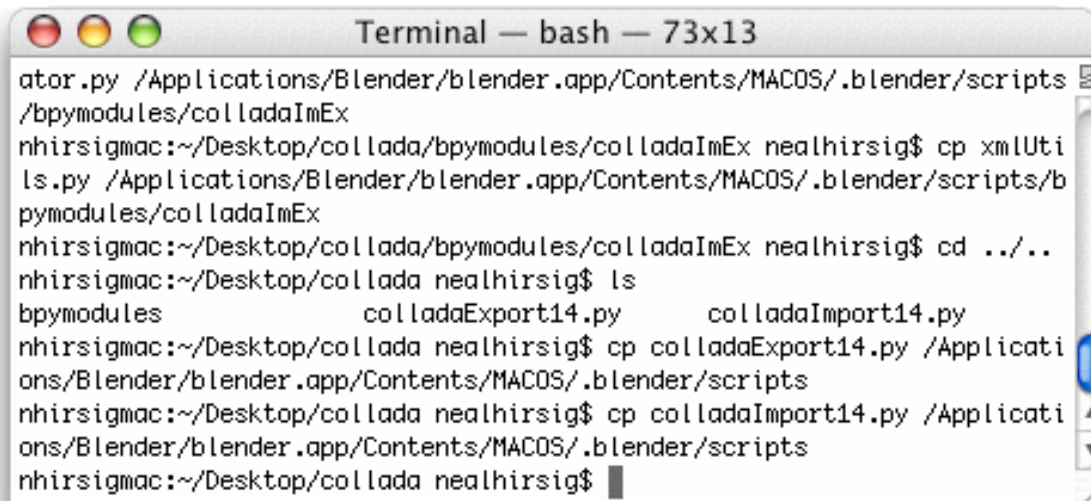
/Applications/Blender/blender.app/Contents/MACOS/.blender/scripts

Type in cp colladaExport14.py

/Applications/Blender/blender.app/Contents/MACOS/.blender/scripts then hit enter. This will copy the colladaExport14.py file to the proper “scripts” directory.

```
Terminal — bash — 73x13
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp translator.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp xmlUtils.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cd ../../
nhirsigmac:~/Desktop/collada nealhirsig$ ls
bpymodules          colladaExport14.py    colladaImport14.py
nhirsigmac:~/Desktop/collada nealhirsig$ cp colladaExport14.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts
nhirsigmac:~/Desktop/collada nealhirsig$
```

Do the same for the colladaImport14.py file.



```
ator.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts
/bpymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cp xmlUtil
ls.py /Applications/Blender/blender.app/Contents/MACOS/.blender/scripts/b
pymodules/colladaImEx
nhirsigmac:~/Desktop/collada/bpymodules/colladaImEx nealhirsig$ cd ../../
nhirsigmac:~/Desktop/collada nealhirsig$ ls
bpymodules          colladaExport14.py    colladaImport14.py
nhirsigmac:~/Desktop/collada nealhirsig$ cp colladaExport14.py /Applicati
ons/Blender/blender.app/Contents/MACOS/.blender/scripts
nhirsigmac:~/Desktop/collada nealhirsig$ cp colladaImport14.py /Applicati
ons/Blender/blender.app/Contents/MACOS/.blender/scripts
nhirsigmac:~/Desktop/collada nealhirsig$
```

You should now have completed the Blender configuration for the MAC which will allow you to export .dae files (including the UV texture information) to Google Earth. You can now quit the terminal.app

To test that the proper files have been replaced, open Blender v 2.46. Go to files / Export / Collada 1.4 (.dae). This will display the Collada Export settings. The top section should indicate that the plug-in version is 0.3.108



