CREATING MODELS

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1.0 Overview

There are two different model formats used in SoF2, MD3 and Ghoul2. MD3 is used primarily for static models and have an extension of .md3. Ghoul2 models are used for ConfusEd entities (for SP), bolt-ons and characters and have the .glm format. Ghoul2 models also have two different methods of being built, one with bones, and the other without. Ghoul2 with bones are used for models that require animations (characters and some ConfusEd models). Ghoul2 without bones are used for non-animated models such as bolt-ons.

This document gives no explanation on actually modeling objects. If you are new to putting models into a game, start with MD3s, as they are far less complex than Ghoul2 models. Also, we use 3DS Max 4 for model creation and our supplied plug-ins work with Max 4. All following instructions assume Max is being used in the creation of models.

2.0 Create an MD3 model

- Export the model from Max to a directory in base/models as .ASE format.
- Create a .QDT file into the directory you exported the .ASE to and name it appropriately. A .QDT file is simply a text file with the appropriate extension. A sample .QDT file follows:

```
$aseconvert \models\objects\airport\box_cart_buggy.ase
$aseconvert \models\objects\airport\box_cart.ase
$aseconvert \models\objects\airport\box_cart_open.ase
$aseconvert \models\objects\airport\giftstore_candy.ase
$aseconvert \models\objects\airport\luggage_cart.ase
$aseconvert \models\objects\airport\steps.ase
$aseconvert \models\objects\airport\wand_detector.ase
$aseconvert \models\objects\airport\sunglasses.ase
```

- Ensure that your new model is in the .QDT with the correct path. If you were adding to the file above, you would insert:
    - $aseconvert models\objects\airport**NEW_MODEL**.ase
- Run sof2data.exe (included) from a command line, or create a batch file that will do the same. The following is a sample command:
    - C:\Program Files\Soldier of Fortune II – Double Helix\bin\sof2data.exe C:\Program Files\Soldier of Fortune II – Double Helix\base\models\objects\airport\NEW.qdt

3.0 Create a GLM model with no bones

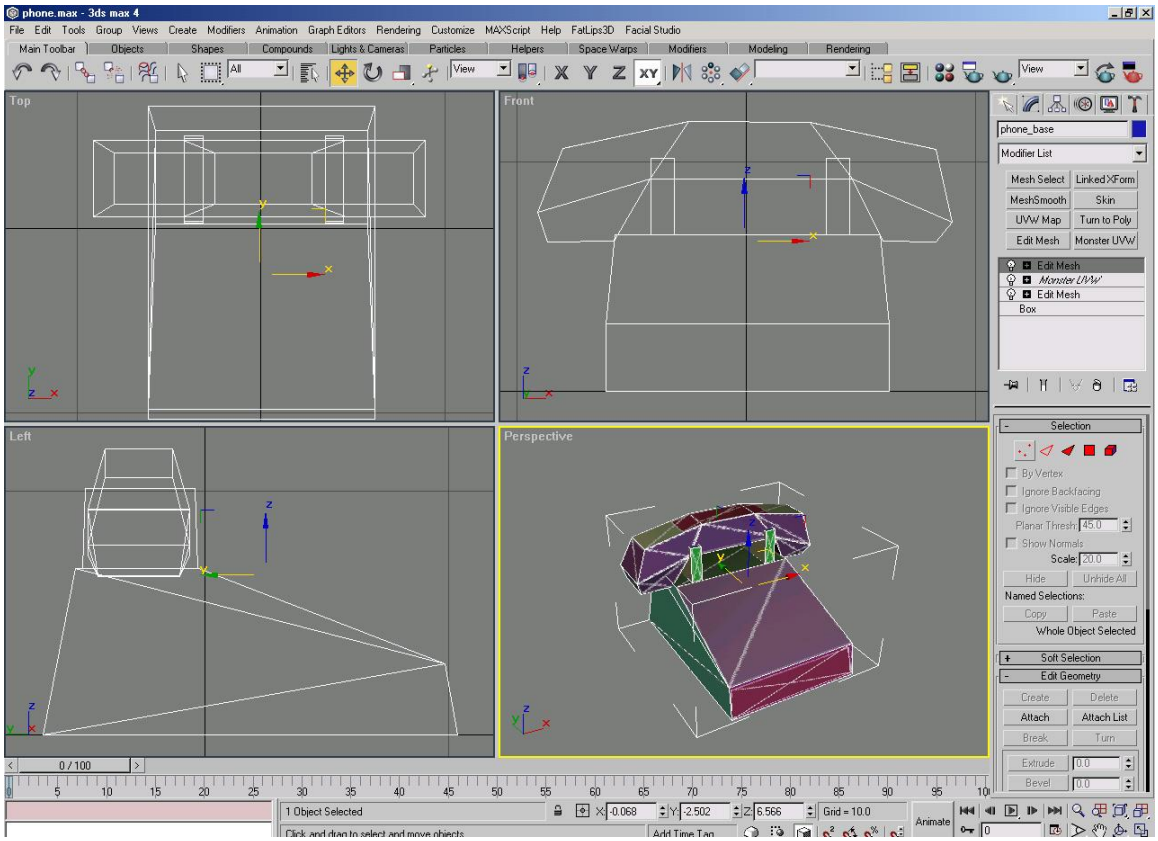
The only change needed to create this type of model is one line in the .QDT file. The command used is $aseconvertg2 instead of $aseconvert.

- Export the model from Max to a directory in base/models as .ASE format.
- Create a .QDT file into the directory you exported the .ASE to and name it appropriately.
- Ensure that your new model is in the .QDT with the correct path. If you were adding to the file above, you would insert:

    - $aseconvert**g2** models\objects\airport**NEW_MODEL**.ase
- Run sof2data.exe (included) from a command line, or create a batch file that will do the same. The following is a sample command:
    - C:\Program Files\Soldier of Fortune II – Double Helix\bin\sof2data.exe C:\Program Files\Soldier of Fortune II – Double Helix\base\models\objects\airport\NEW.qdt

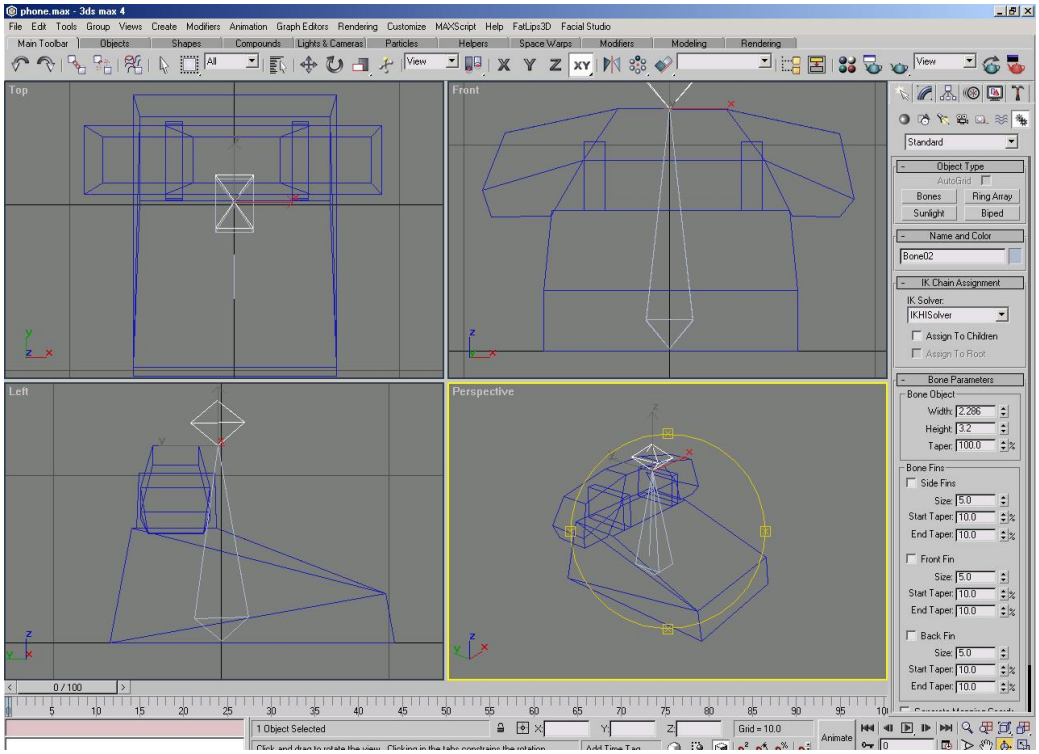
4.0 Create a GLM model (non-character) with bones

- Make your model. Flatten your stack if you add a lot of modifiers to it.

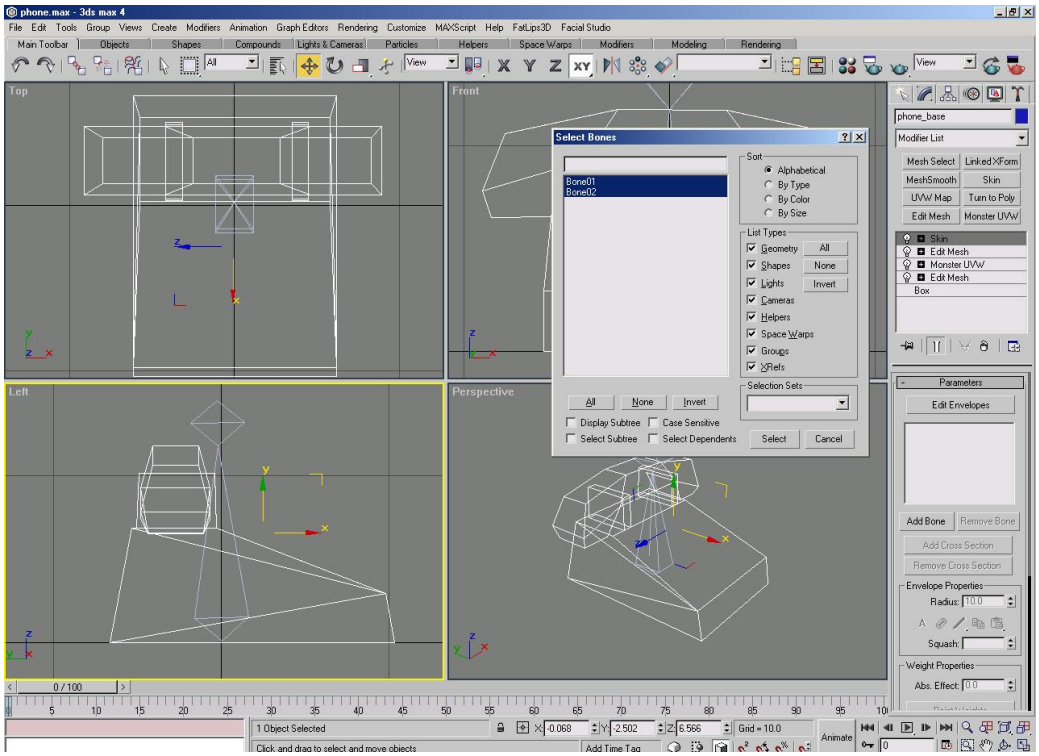


- Apply mapping to your model.

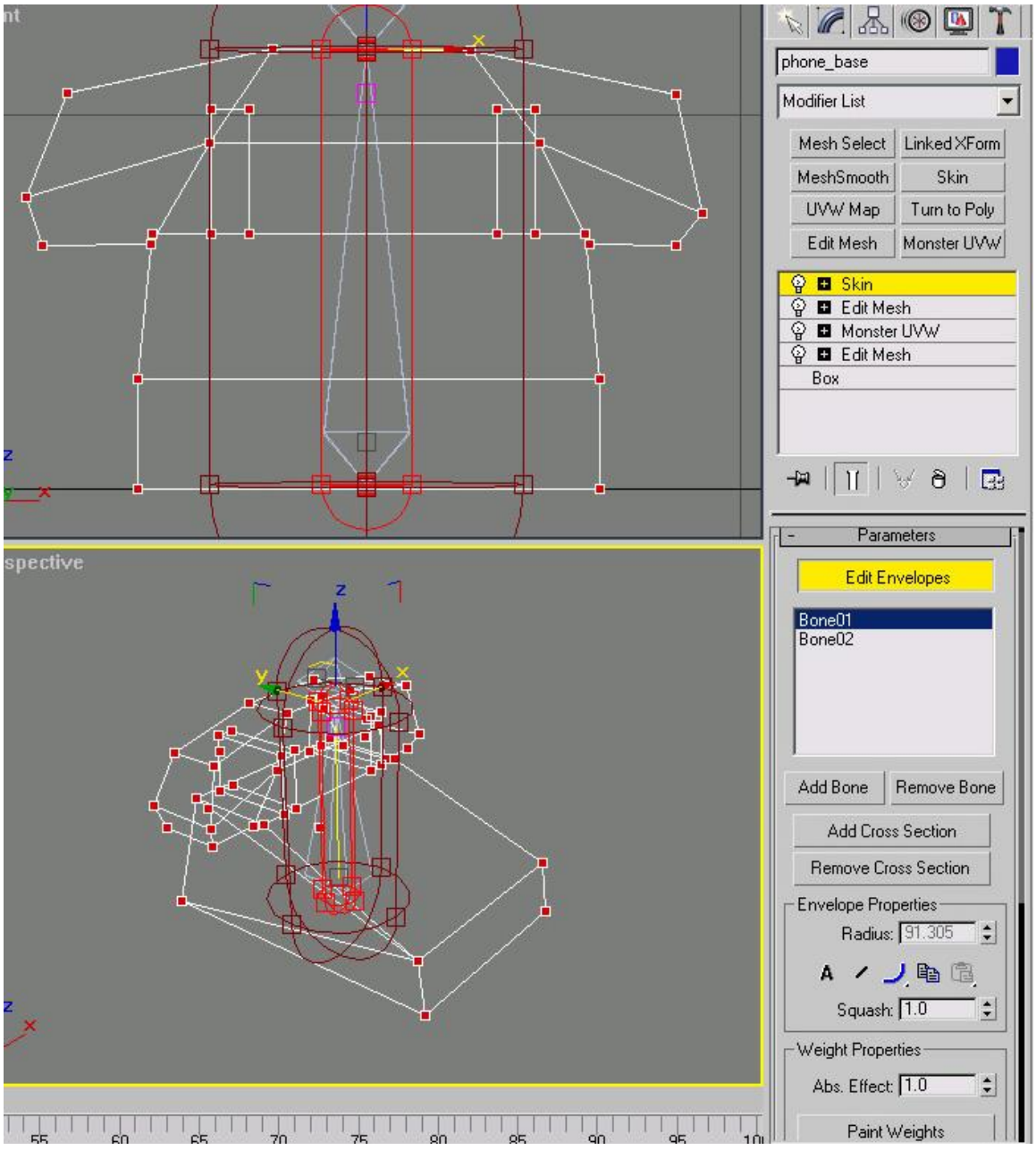
- Create a bone and place it in your model.



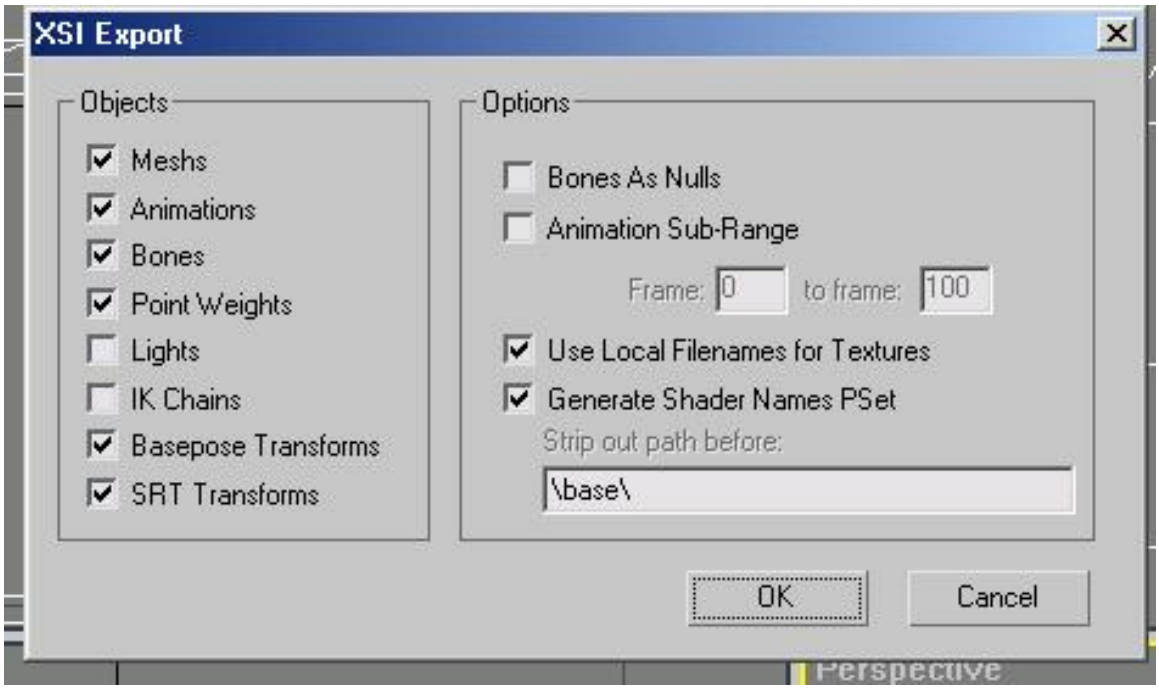
- Go to the modifier stack and apply a skin modifier to your model.



- Add bones to the skin modifier.
- With the model still selected, assign all the vertices of the model, and give it a 100% weight property. If you want your object to move, you can assign more bones and weight properly. Also, if you want it to animate, it is best to keep the sequence around or 25 frames less.



- Now you are ready to export as a XSI. You must have the XSIImporter plug-in installed. An example path for export is c:\Program Files\Soldier of Fortune II – Double Helix\base\models\objects\common\phone



- Create a text file with a .CAR extension in the directory you saved the .XSI. An example follows:

```
$aseanimgrabinit
$aseanimgrab models/objects/common/phone/phone.xsi
$aseanimgrabfinalize
$aseanimconvertmdx_noask models/objects/common/phone/phone -makeskel c:/Program Files/Soldier of Fortune II – Double Helix/base/skeletons/objects/common/phone/phone
```

- Compile the model with the Carcass tool. This can be done via command line or a batch file. An example follows:

```
C:\Program Files\Soldier of Fortune II – Double Helix\bin\carcass c:\Program Files\Soldier of Fortune II – Double Helix\base\models\objects\common\phone\phone > carcassResults.txt
```

- If no errors occur, you'll now have a .glm in the directory that your .XSI was exported to, a .gla file and a .frames file in a parallel folder in base/skeletons. If an error occurs, the reason for the error will be shown in the carcassResults.txt.

4.1 Hints

- Make sure you point weight every vertex in the model.
- Use .PNG and .JPG for textures.
- Don't make a mistake of placing two or more skin modifiers on the same object.
- If an error occurs, re-read all of the instructions carefully and check your path to each thing.