

Animated Morrowind Heads, by Xaphod

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Note on this tutorial:

This tutorial teaches how to produce animated heads for Morrowind (in general). It assumes a degree of familiarity with 3DSMax - teaching modelling and animation skills is beyond its scope, however I will endeavor to provide more detailed specific modelling tutorials at a later date.

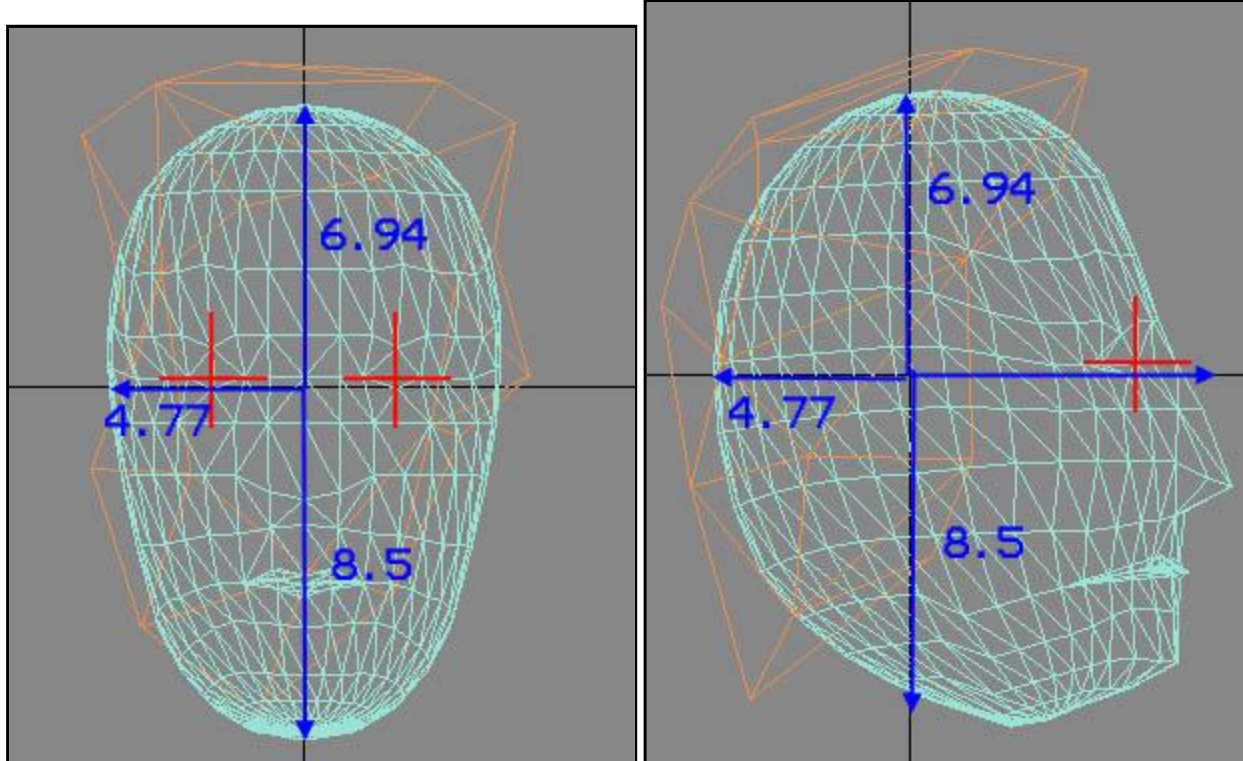
The original heads vary quite a lot, so unfortunately it is inevitable that a degree of trial and error is required to make sure it doesn't intersect undesirably with armour pieces.

Part 1

PART 1A: Making the head

The head should be made as a max poly or mesh, and be.. head shaped.

SCALE DIAGRAMS



(All measurements in MAX units, one of which is equal to about 3/4 of an inch in Morrowind.) The head example I created here is approximately the correct scale to fit the Imperial Coif and Glass helm, however due to the inaccuracy already inherent in Morrowind it is difficult to be 100% accurate.

Eye positions are rather approximate for the same reason.

The centre/pivot point of the head is at the **origin**.

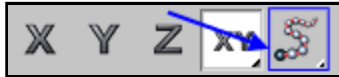
The hair is created at the same point and to the same scale.

The eyes have to be created to allow the eyelids to open and close, and the mouth has to be created to allow the mouth to open and close.


PART 1B: Setting up the head for animation

The MORPHER modifier is what's used to animate the head.

First, you need access to the **SNAPSHOT** button, which is on the same button as the **ARRAY** tool, which is on the main toolbar of MAX 4 and the **AXIS CONSTRAINTS** toolbar of MAX 5, and is highlighted in blue here:



Select the head model, which should be called something sensible like "**HEAD**" and press **SNAPSHOT**.. select *SINGLE* and *MESH*, then press **OK**. Repeat this last step.

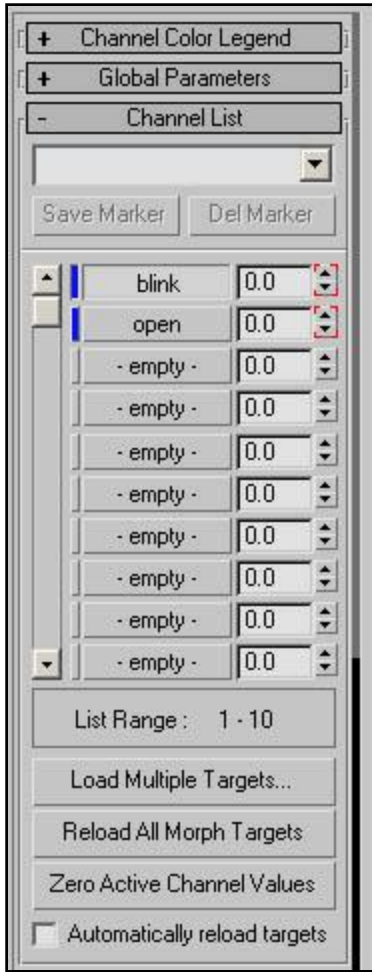
Press the **SELECT BY NAME** button () and there should be three objects in your scene: **HEAD**, **HEAD01** and **HEAD02**.

Rename **HEAD01** "**BLINK**" and **HEAD02** "**OPEN**", so there are now three meshes called **HEAD**, **BLINK** and **OPEN**.

Hide everything but "**BLINK**". Modify the eyes so that they are closed.

Hide everything but "**OPEN**". Modify the mesh so that the mouth is open.

Hide everything but **HEAD**, and select **HEAD**. Select the **MORPHER** modifier from either the toolbar or the modifier list. Click "**LOAD MULTIPLE TARGETS**", select **BLINK** and **OPEN** (it is *not* necessary to select **HEAD**) and click **LOAD**. The morpher tool rollout should look something like this:



You are now ready to start animating.

Part 2 - Animation and conversion

PART 2A: Animating the head

You should now have a head mesh with the morpher modifier applied. Time to start animating.

The head needs two animations - first, for the mouth to open slowly, and secondly, for the eyes to blink with the mouth closed.

We shall animate the model so that the mouth begins to open at frame 0, and is fully open at frame 25. The blink animation shall happen between frames 30 and 40.

In max 3 or 4, turn on **ANIMATE**; in max 5 turn on **AUTO KEY**.

At frame 0, click up then down on the sliders in the morpher dialog. This sets a keyframe for each slider with the value at 0.

Go to frame 25. Set the **OPEN** morpher slider to 100. Click up then down on the **BLINK** slider to set a keyframe with **BLINK** set to 0.

Go to frame 26. Set all the **OPEN** slider to 0. Create another keyframe for **BLINK** set to 0.

Go to frame 30. Create a zero key for both sliders.

Go to frame 36. Set the **BLINK** slider to 100 and create a keyframe for **OPEN** at 0.


Go to frame 40. Set all sliders back to 0.

Now the keyframes are there. They need some editing.

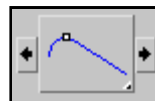
Right click the tag on the timeline for the keyframes at frame 0.. select the "**OPEN**"

keyframe, and set the *OUT* interpolation setting to **EASE OUT**.

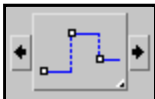


Press the "next keyframe" arrow,  and set both the *IN* and *OUT* interpolation

for the "**OPEN**" keyframe at frame 25 to **LINEAR**.



At frame 26, the *in* interpolation should be set to **LINEAR**, and the *out* should be set to

PLATEAU.  Close the "**OPEN**" keyframe dialog.

Right click the tag for the keyframes at frame 30 and select the "BLINK" keyframe. Set the *in* value to PLATEAU, and the *out* to EASE OUT.

Press the next keyframe arrow, and set the keyframe interpolation for "BLINK" to EASE IN and EASE OUT.

The last keyframe for "BLINK" should be set to EASE IN and PLATEAU for *in* and *out* respectively.

Right.. that's the animation set up.. if you play it the mouth should open, then snap shut, and then the eyes should close then open.

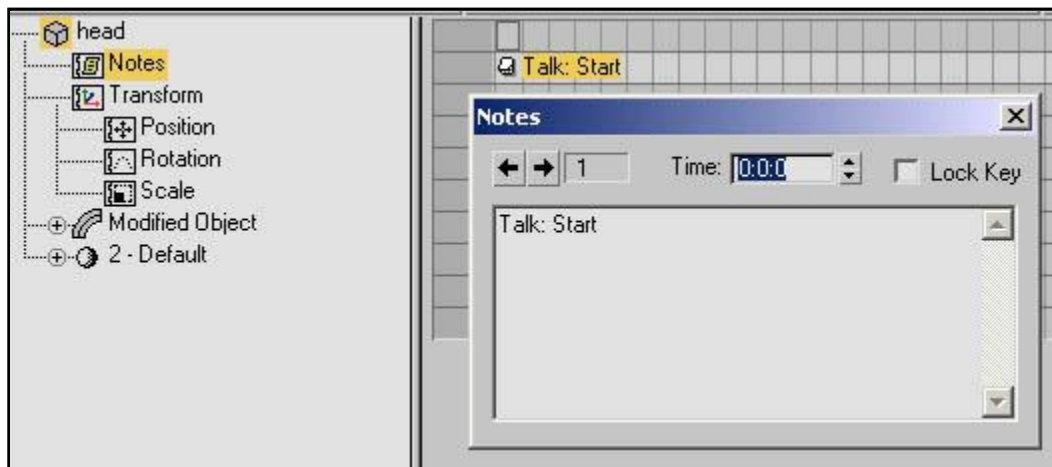
PART 2B: Note tracks

You now have to create a note track to inform Morrowind when each animation group begins and ends.

Open up a *track view* for the head model by either right clicking and selecting **TRACK VIEW SELECTED** in max 3 or 4 or **CURVE EDITOR** in max 5. In MAX five, set *MODES* to **DOPE SHEET**.

In the *TRACKS* menu select **NOTE TRACK >ADD**. In Max 4 there is an **ADD NOTE TRACK** button instead. Now you need to add notes to this track.. notes are added in the note track with the **ADD KEYFRAME** button.

Add a note at frame 0. Right click the note and write in "**Talk: Start**" (without the speech marks). Close the "notes" dialog.



Add a second note at frame 25. Write in the value "**Talk: Stop**"

The third note goes at frame 30 and has the value "**Blink: Start**", and the last note is at frame 40 and has the value "**Blink: Stop**".

PART 2C: Exporting

Select the head and click **FILE >EXPORT SELECTED**. This ensures that you only export the head, and not the hidden **BLINK** and **OPEN** objects.

Export with the default NIF exporter settings. Save the NIF file under a sensible name in the **morrowind/data files/meshes/b** directory.

Save your work (though you should always save regularly anyway) and close MAX.

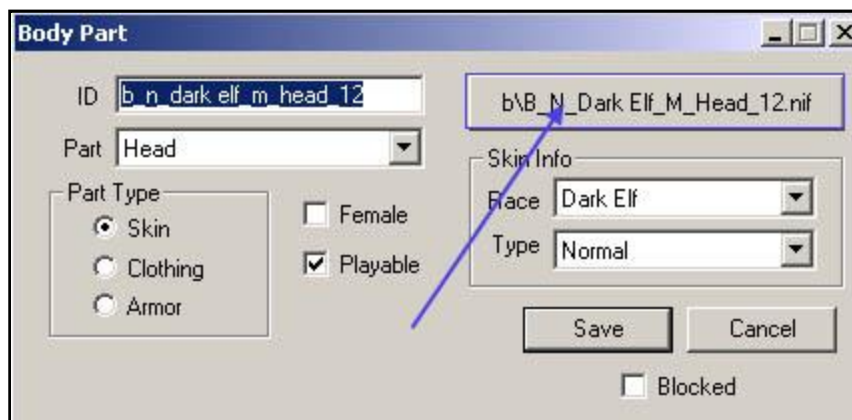
PART 2D: Opening in Morrowind

Load up TESCS as normal and selecting the standard ESM files. Go to the **BODY PART** section of the *Object window*.

There are two ways you can go from here - either to replace an existing head, or to add a new one.

To replace an existing head, find the original in the list of body parts (type will be **SKIN** and part will be **HEAD**) and double click it.

Click the button with the mesh name on it, and select your new head NIF. Click save, save your plugin, and that head will be replaced.



To add a new head to a race's selection, right click the list of body parts and select **NEW**. Give it a unique id (eg: "**YOUR_NAME_DARK_ELF_HEAD01**") and set the **PART** to **HEAD**. Part type is **SKIN**, and the other settings depend on what race and gender you want your head to be for.

Click **ADD ART FILE** and select your new head NIF. Click save, save your plugin, and that head will be available for a new character of the correct race and gender to use. You can also add new NPCs with this head, or alter existing NPCs so that they use this head.

This concludes the Morrowind Heads tutorial.