

# Modo, Zbrush and Messiah for Fast Production

Using Modo, Zbrush and Messiah together for creating a detailed character, rigging it for animation and bringing all together in Modo.

October 29, 2010



Mini-tutorial covers a workflow using the above 3 software together for high detail character creation, preparing for animation and combining the results. **Idea here is to show how to make these software work together – not how to model, sculpt or animate.**

## Method Limitations

You will need a base-mesh to begin with. I'm giving away the one I used (see male ver2).

While a base mesh like this is good for extensive sculpting, it works best for naked characters. While some clothes can be just sculpted on, for better results I would either add polygons on the base mesh, or do separate cloth-meshes.

While the autorig is fine for many types of animations, for more advanced stuff (lip-sync, better deformations, muscle bulges, etc.) you will obviously need something better.

## Real world example – a rushed task

To give an example for this, I had a brief like so: **Make a group of Zombie-like dead people standing around in place and moving only a little.** I had 5 or so days to do it which is quite quick considering my old slow computer takes 2-3 days just for rendering.

Because the figures will be in background of the scene, out of focus and behind effects, and because of the rush, I opted for very simple texturing, rigging and animation – and no facial animation. I ended up with 3 variations of one character and 5 simple looping animations. The dead mainly sway in place. **Result is passable but some zombies are really not looking the way I want. See the breakdown for my problem.**

## Production Breakdown

**Modo : Shape rough base mesh in Modo and save out an OBJ**

Not much to explain – either model your own mesh or pick one up somewhere. You can grab my human male base mesh (ver2.)



## Zbrush : Import to Zbrush and sculpt to your hearts content

Have fun sculpting. I went up to level 6 with subdivision (see pic). I also used surface noise found in latest Zbrush(4.5) for extra skin detail. And herein lies my mistake: Overdoing the noise strenght will push the shape out in an unified manner that, especially when whole sculpt is later applied as a displacement map in Modo, makes the characters lose detail and look bloated. I have this problem with 2 of my zombies(see link to video at the doc-end). Somehow I noticed it too late – didn't have time to re-render.

## Zbrush : Add uv-mapping

I chose AUV-tiles because it is automatic and good for a mesh like this that has quite evenly sized polygons. Default settings give each polygon same size in UV-map. Thing to remember with AUVtiles or GUVtiles or similiar, though, is that if you use them you should paint your textures in Zbrush. At least in Modo(302) painting on an AUVtiles uv-mapped mesh lead to paint in one place 'leaking' all over the mesh. Zbrush won't have this issue – especially not as you can paint model first and uv-map after.



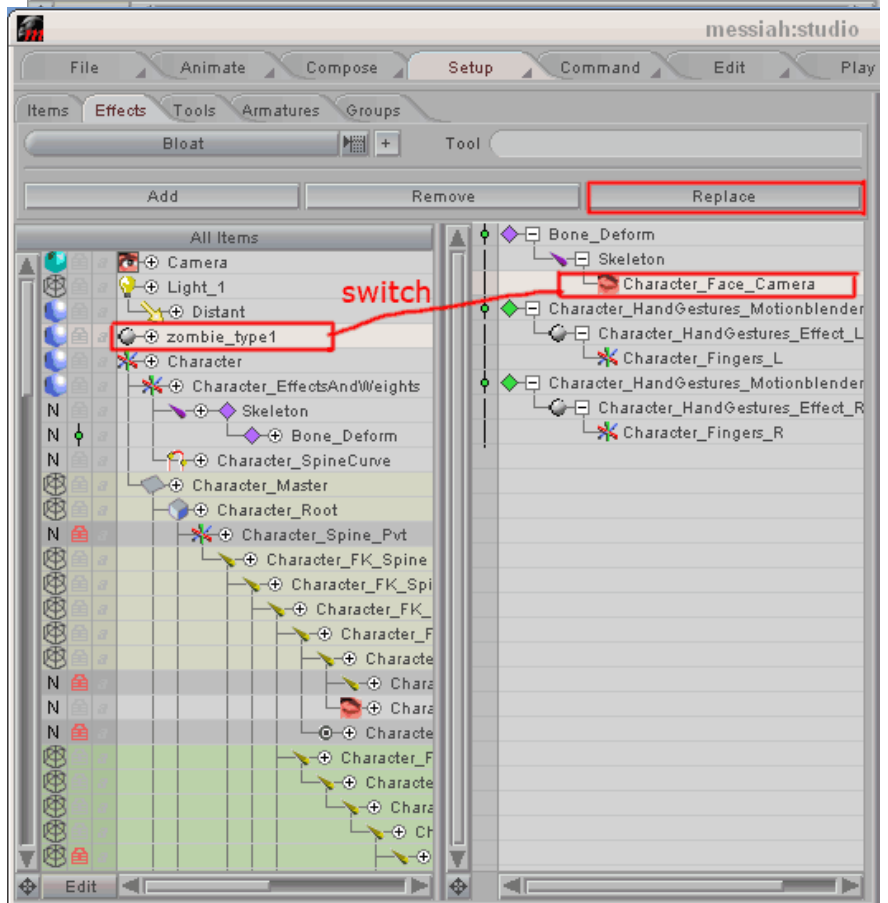
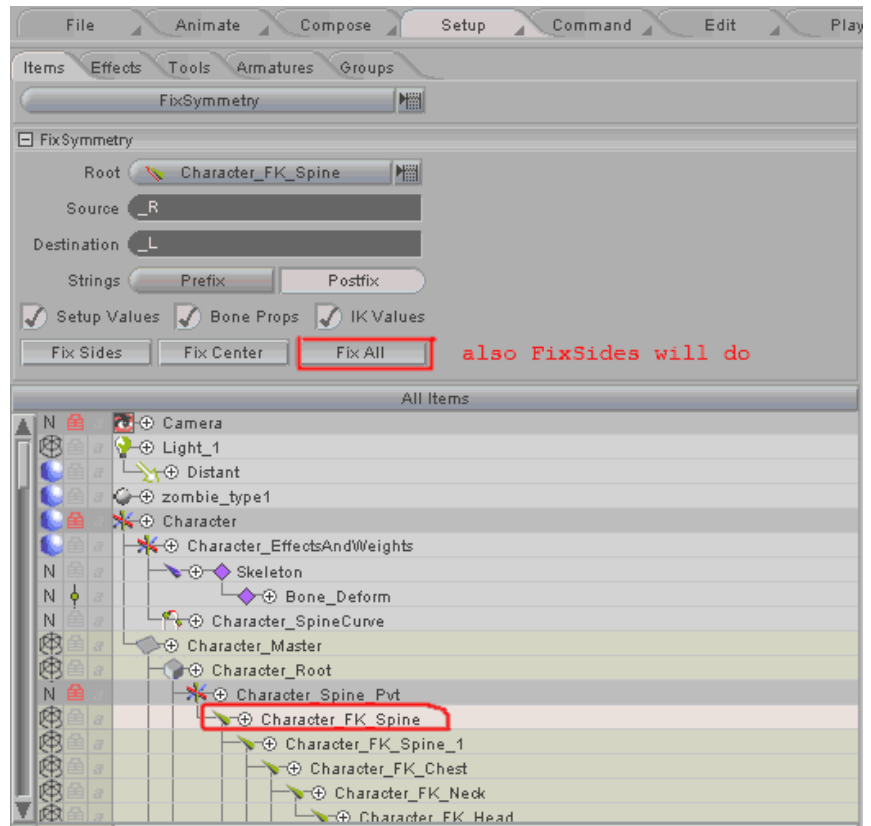
## Zbrush : Export the mesh from lowest subdivision level and create and export a displacement map

Note that sculpting on any level changes the bottom level(base mesh) as well, so you better export your base when finished. Final thing is to export a displacement map which again you do when on lowest subdivision level. For my settings see the picture.



## Messiah : Import the base mesh to Messiah and use autorig to get it rigged

1. Load the mesh in. Select it and in the Setup-tab and hit Autorig(see Setup>Items). Next in Setup>Effect find the Character Face Camera under Bone Deform, select that and your character mesh and hit Replace(see pic).
2. Next in Setup-tab move the Character Root to where your figures hip center is. Then, starting from hips and going out bone by bone, scale and rotate bones to fit the character. Work only on one side, right or left.
3. When done placing bones, go to Setup-tab>Items>Drop-down>Fix Symmetry. Root could be your FK\_Spine or similar base bone. FixSymmetry will use it as a starting point and will go down the hierarchy looking for things with your typed suffix/postfix. For Source type the letter of your working side, like \_R, and for Destination the other one (see pic). Then run FixAll or FixSides-command.
4. Now you can test your rig in Animate-tab by rotating bones.

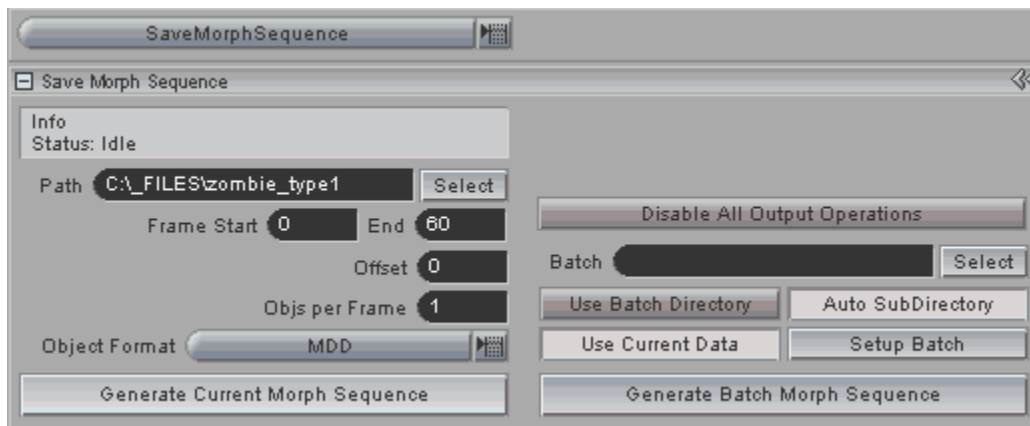


Remember to undo your tests When happy save your scene as 'charactername\_rigging' or whatever for backup purposes. Then hit Autorig in the animation-view and wait. Save scene as 'charactername\_rigged'.

There is also a [video tutorial on Autorig](#) (not mine).

## Messiah : Animate and export animation as MDD

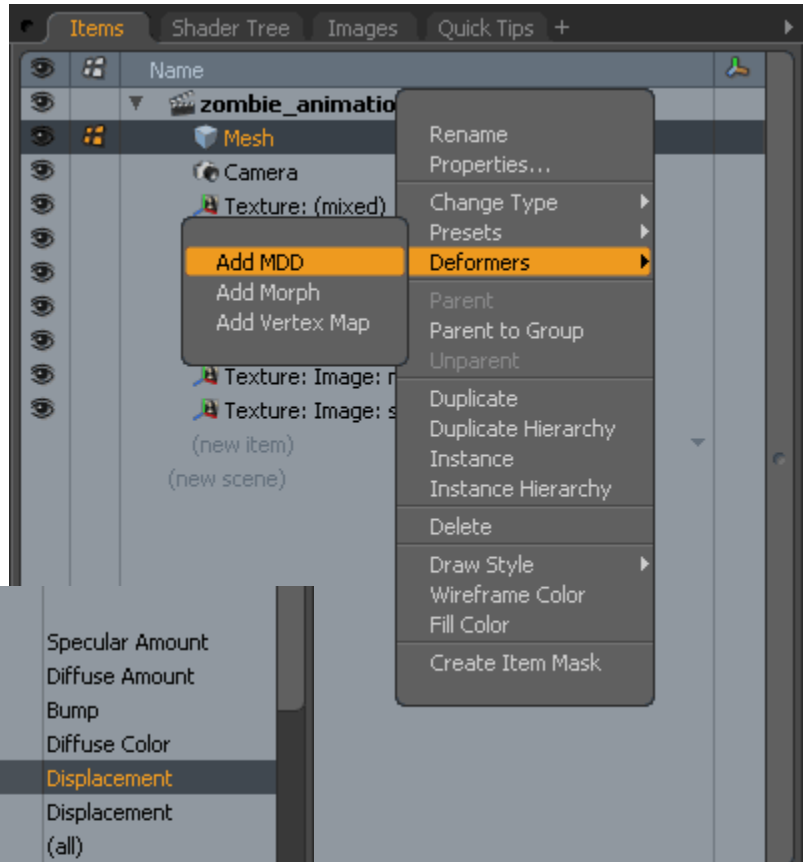
I leave animation to you. MDD-export happens in the Customize-tab>Drop-down Menu>SaveMorphSequence. Select your mesh. Type in what frames to export and give a filename. Generate Current Morph Sequence.



## Modo : Mesh to Modo and apply MDD

Import or load the mesh and right-click it – in the menu find the MDD-deformer and load the file. Now your mesh will be animated (see Animate-tab).

Setup lights and camera, texture and displacement and render to image series. You can see my lighting tutorial for assistance.



For texturing do what you want. I used a simple procedural (Cellular) for both diffuse and bump, and painted a mask for specular and diffuse amounts – mainly just added black to eye-sockets because director wanted all black eye-sockets, no highlights or anything.

For displacement I have yet to find optimum solution since Zbrush displacement export-workflow has changed since ver.3 and I just started with 4.5.

However here is something I find functional: Bring in your displacement and make one instance of it. Then set the instance to Invert and its Blend Mode to Subtract (see pic). Now the regular displacement pushes polygons both Out (positive) and In (negative) and the second displacement adds to

the negative. Play with the instances opacity and your materials displacement amount for final result.

Remember Modo defaults to 24 frames/second (film framerate) so that's your render output unless you change it. Finally when you have a series of images take them to your favourite video editing software and make a video.

## My result with this method

Actual movie effect has more of these figures standing on the background of a scene (hidden behind effects and out of focus). This video is just so that I can show them to you. Was a rushed job with problems and lackluster animation, but there you go.

See it [in HD at Vimeo](#).