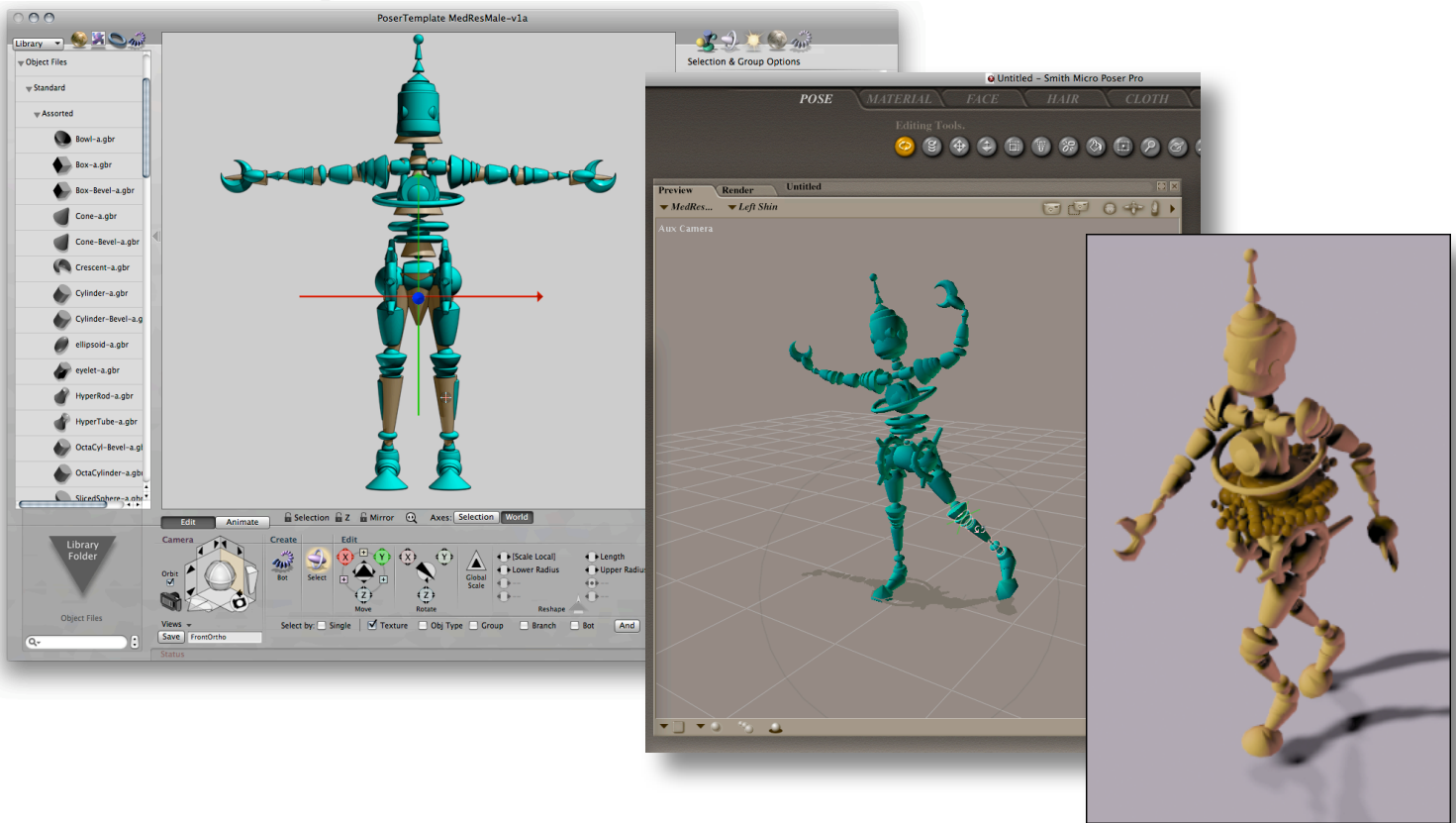# GroBoto to Poser
## creating Poser figures with GroBoto

GroBoto to Poser
Introduction

This documents describes the simple steps for creating geometry for a Poser figure using GroBoto. We've provided a GroBoto template file (available online - http://groboto.com/Online_Resources.html), that makes the process very easy.

Here is what you'll need to create your GroBoto/Poser Figure:

- GroBoto (2.1 or later —Latest 2.x version recommended)
- Poser (Version 7 recommended)
- GroBoto file: PoserTemplate MedResMale.gbr (see link above)
- A good working knowledge of GroBoto and Poser. If you are new to either program, please refer to their manuals for more information.
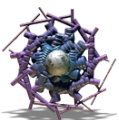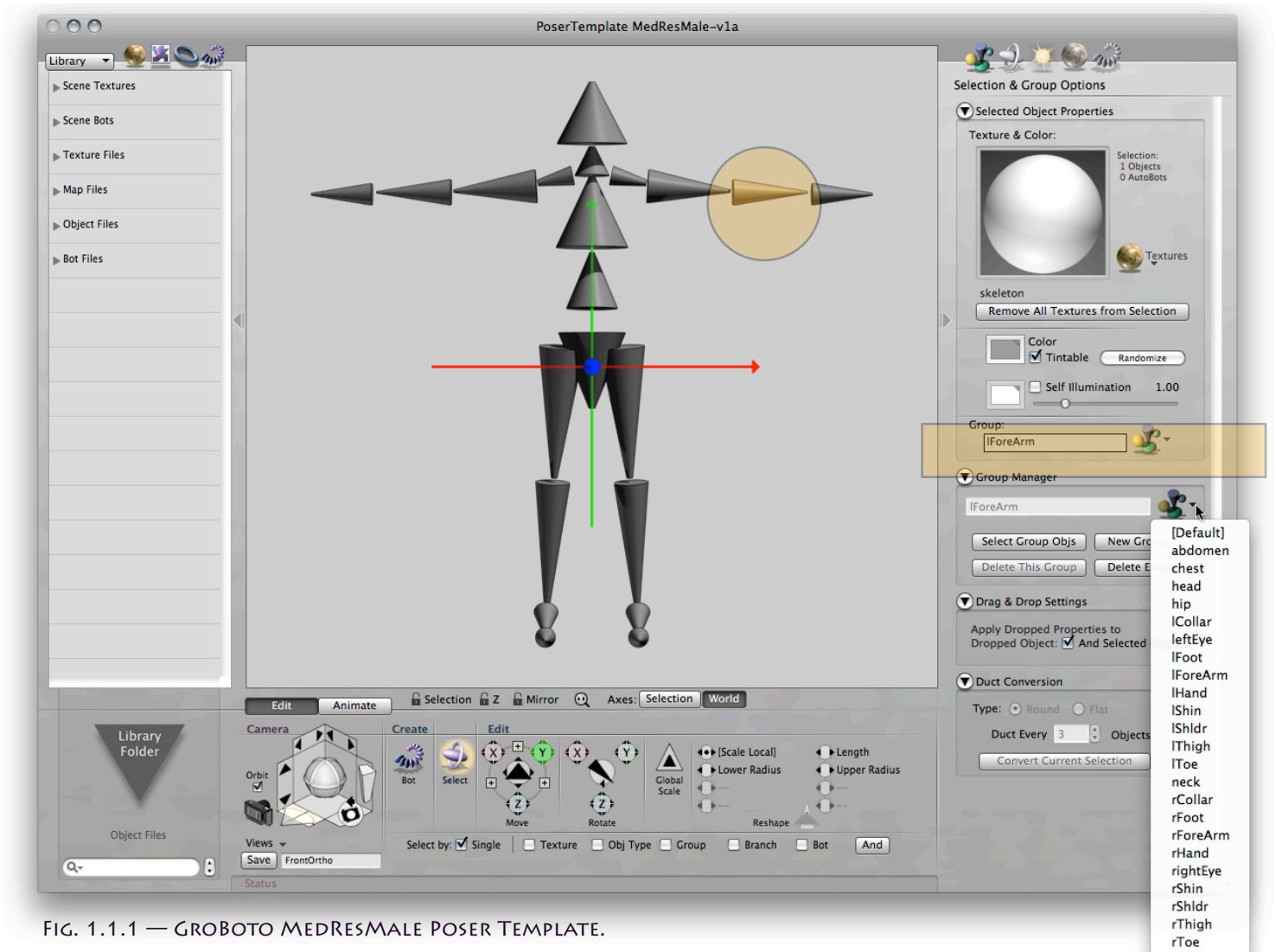
1. Modeling in GroBoto

Fig. 1.1.1 — GroBoto MedResMale Poser Template.

1.1 Load the GroBoto template file

Launch GroBoto and load '**PoserTemplate MedResMale-v1a.gbr**' That file contains GroBoto geometry that closely matches the sizes and locations of the Poser **MedResMale** bones. It also has all of the group names predefined for those bones. Each of the template's objects has been assigned to it's corresponding Poser bone group.

Figure 1.1.1 above, shows that the selected GroBoto cone (circled) is assigned to the **lForeArm** group. Figure 1.1.1 also shows the drop down menu in GroBoto's **Group Manager** containing all of the necessary Poser bone groups. This GroBoto model is actually ready-to-go. It could be exported as-is and imported into Poser. Of course its real purpose is to serve as a guide for creating your own Poser figures...
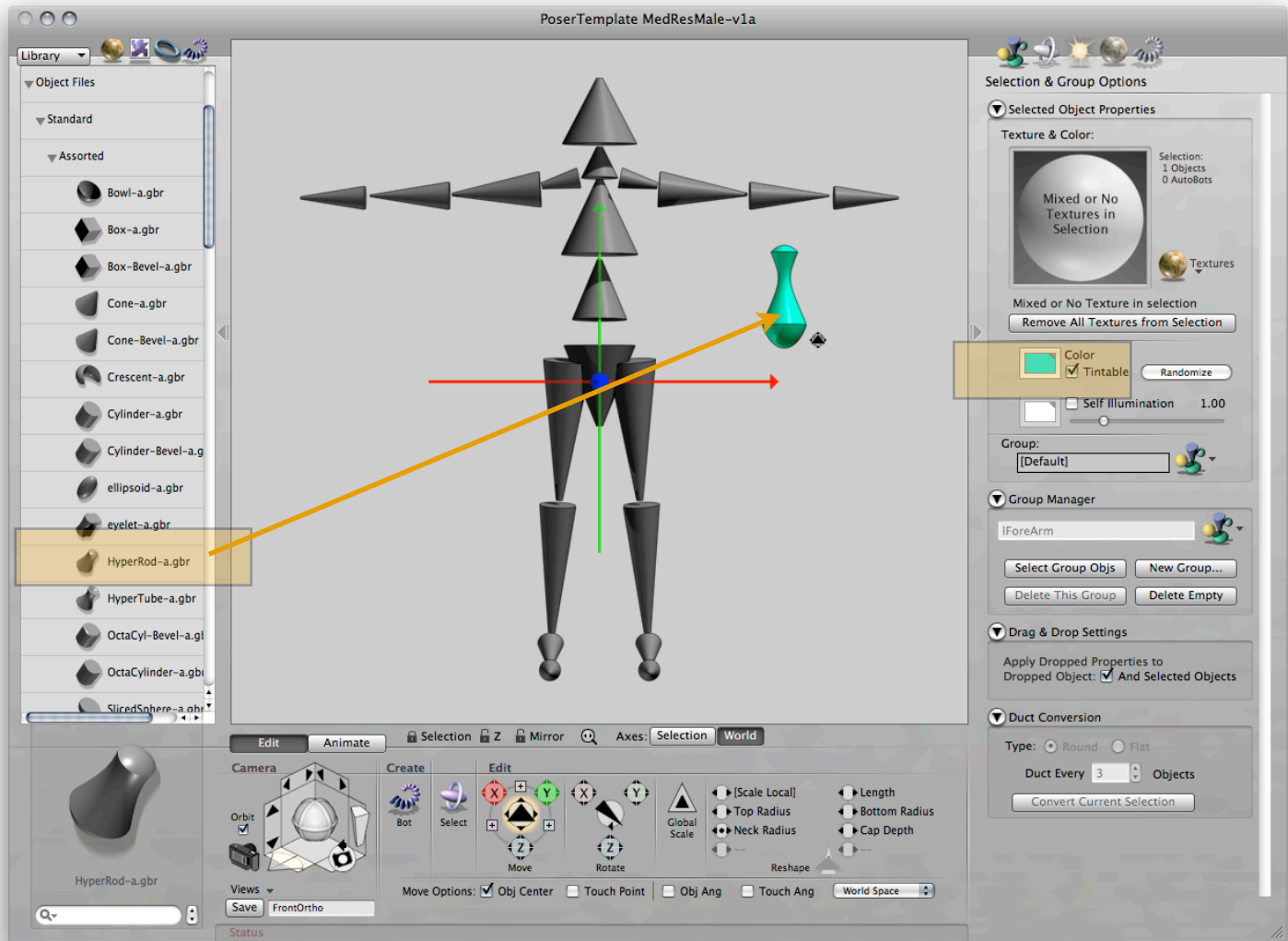
Fig. 1.1.2 — Adding GroBoto Primitives to your model.

1.2 Building your GroBoto Figure

Now we start building a figure using the template objects to position and orient GroBoto objects. Using the template as a guide is a tremendous time/work saver. Doing so will make aligning your geometry to the standard **MedResMale** skeleton in Poser very easy.

In fig 1.2.1, we have simply dragged a **HyperRod** primitive into the scene — just drop it anywhere, we will align it in the next step. Change the color to something bright — this will help us visually distinguish our new geometry from the template cones. You can use any GroBoto primitives to construct your figure. However some are more effective than others. **Please see the Important Notes on the following page before you start building your figure.**
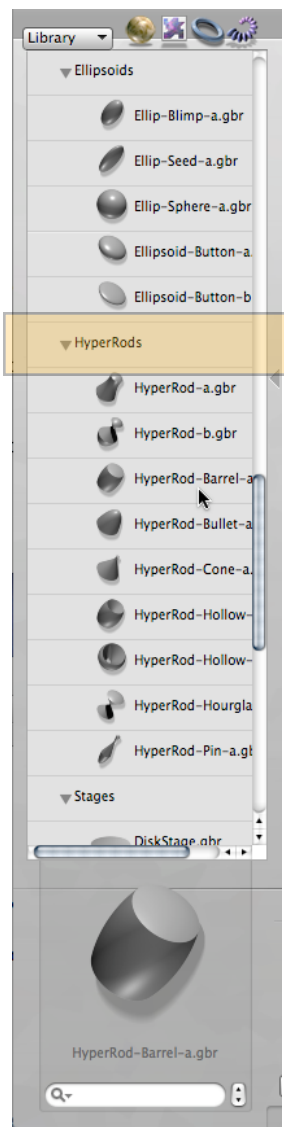
Important Notes on GroBoto Primitive types:

Before we continue creating our GroBoto figure, a quick look at GroBoto Primitives and Export options is needed. GroBoto does not treat all of its Primitive types the same when exporting polygonal meshes. Some simple forms (like Cylinders and Cones) are never subdivided along their length. This is efficient when exporting meshes that will not be modified later. However, Poser will often want to bend these forms when posing or animating.

Fortunately, there is a perfect workaround. The **HyperRod** primitive is very mutable. Depending on its settings, it can become a Cone or Cylinder... or many other interesting forms — all of which can be subdivided both radially and lengthwise.
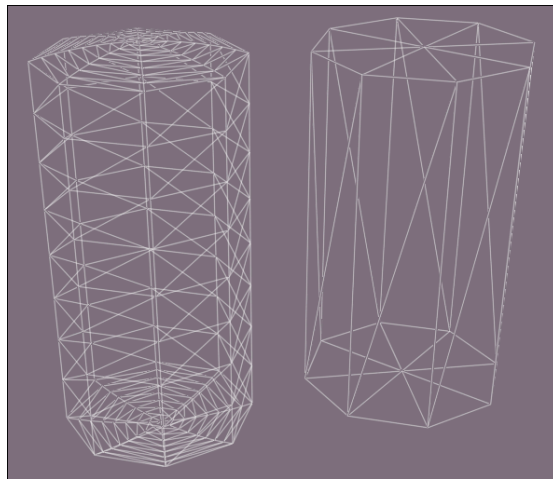

Fig. 1.2.3 — A cylinder-shaped HyperRod (left) vs. a Cylinder (right) imported into Poser.

If you want your figures components to be bendable in Poser, use HyperRods (or any other primitive that offers 2-way subdivision — including Ellipsoids, Spheres, Bowls, etc.)

Primitives that do not support length subdivisions have that setting disabled in GroBoto's Output Settings window (Fig. 1.2.4).

This does not mean you should never use those simpler primitives. If you are creating rigid, mechanical joints in Poser, those forms are fine (and efficient). Also, if you create figure elements composed of many small primitives (like a row of disks or blocks), they will be fine when bent in Poser.

Note: In GroBoto version 3, we will have more mesh export control & options including Quads, and single surface Unified meshes.
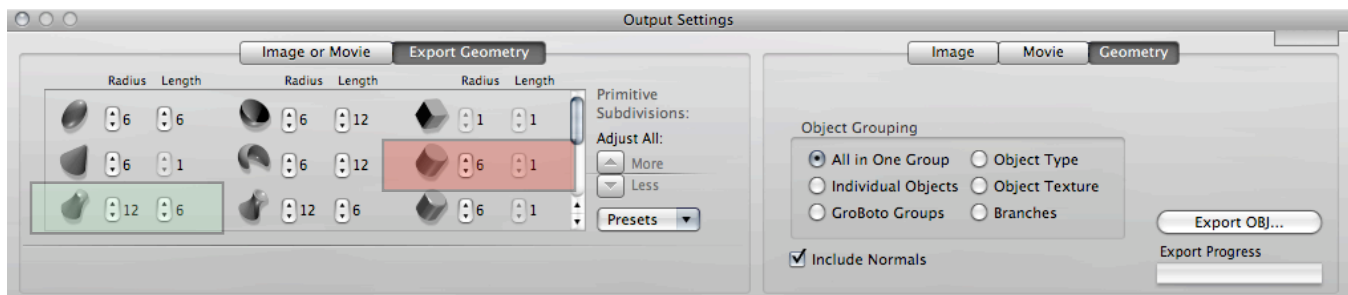

Fig. 1.2.4 — GroBoto's Output Settings Window — Note the disabled 'Length' buttons for the Box, Cylinder, and Cone primitive types.
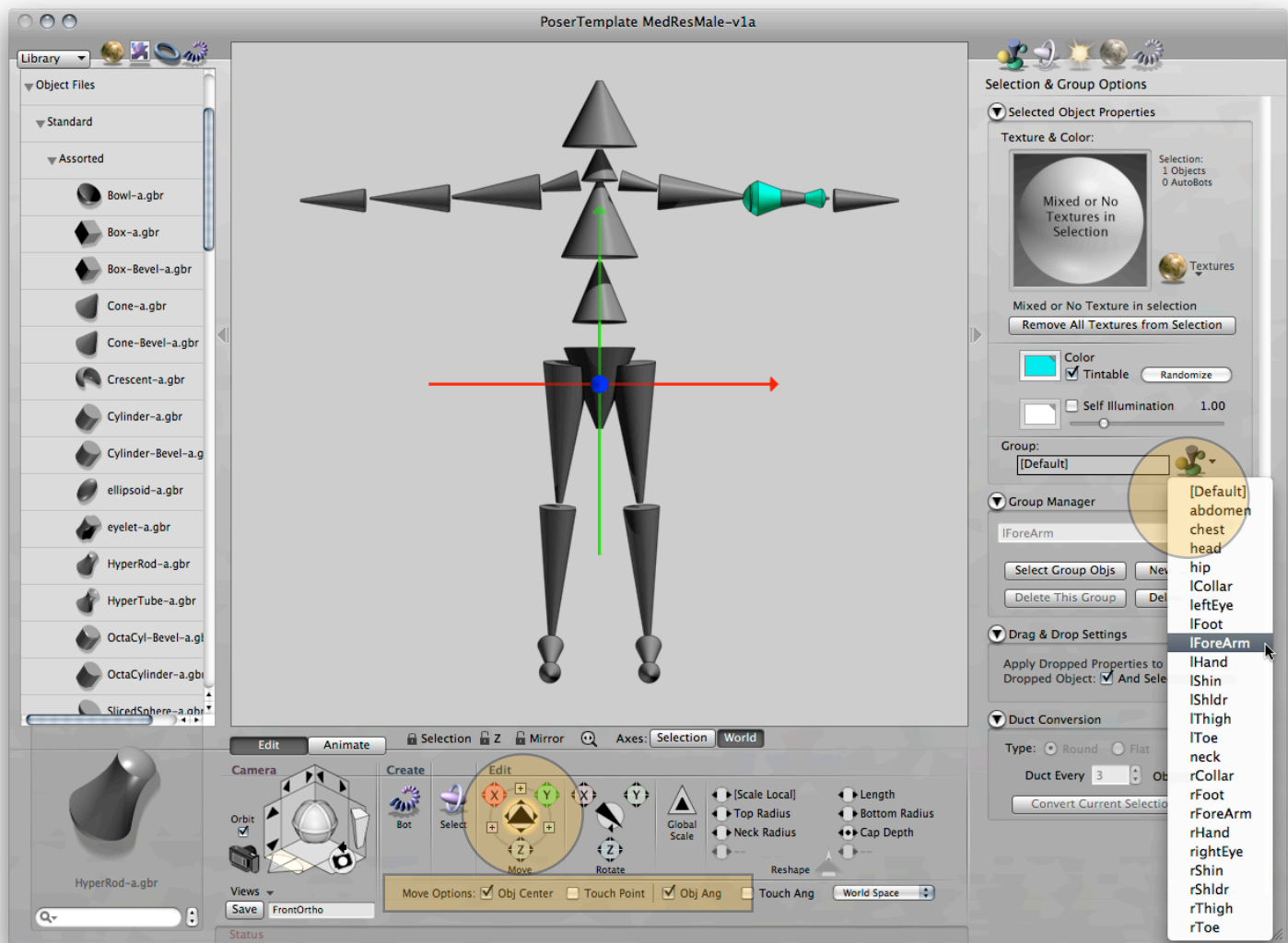
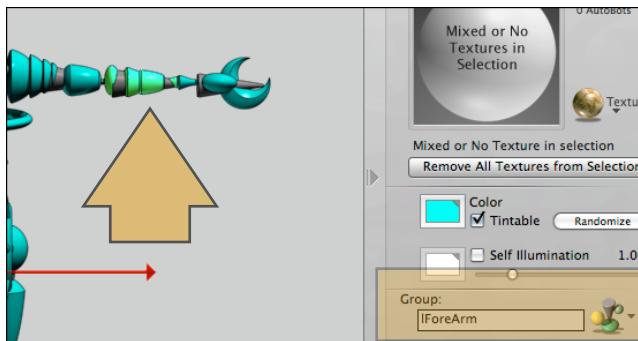FIG. 1.2.5 — SNAPPING A PRIMITIVE INTO PLACE, AND SETTING ITS GROUP.

FIG. 1.2.6 — SEVERAL GROBOTO PRIMITIVES ASSIGNED TO A BONE GROUP. ANY NUMBER OF GROBOTO PRIMITIVES MAY BE ASSIGNED TO ANY BONE GROUP.

OK, back to building our figure... In fig 1.2.5, we have snapped our HyperRod into place using GroBoto's **Move Tool** with the **Obj Center** and **Obj Angle** options on.

Next (with the HyperRod still selected), we assign it to the predefined **lForeArm** group. This tells Poser to use the corresponding bone to manipulate this primitives polygons. Of course, your GroBoto primitive's location and orientation do not have to match the skeleton template exactly, but they should be in the same general area so that the Poser bones will match up. Any number of GroBoto primitives may be assigned to any bone group.

Building your complete figure is simply a matter of repeating this process of adding primitives and assigning them to bone groups.
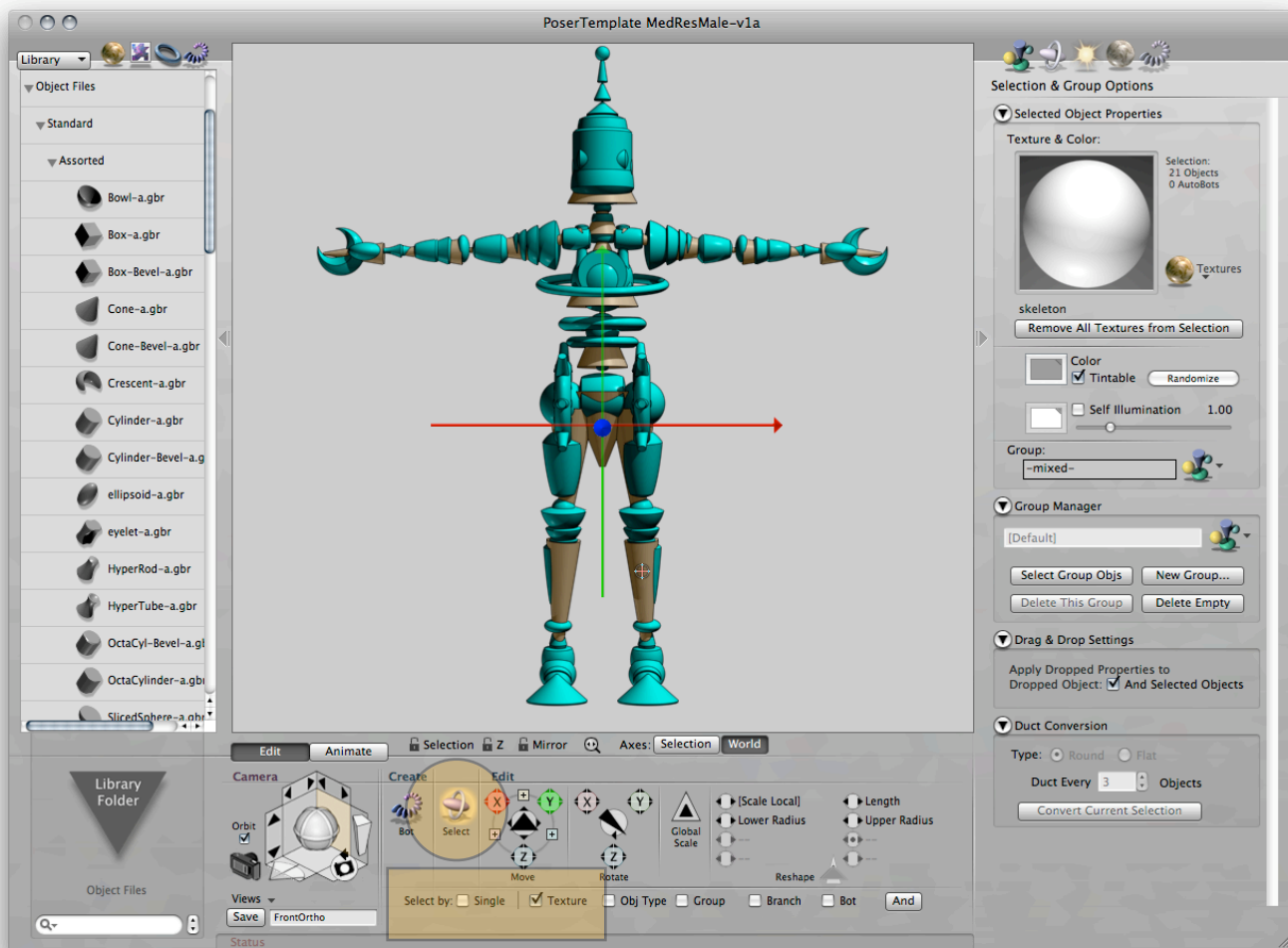
1.3 Exporting your GroBoto Figure

After all of your GroBoto geometry is in place, and assigned to the proper groups, You are ready to export.

Since GroBoto does not have an option to export only part of your model, we need to ged rid of the skeleton template objects. Before you do that, it's a good idea to save your complete GroBoto scene — template objects and all — just in case you need to rework anything.

Use the Select Tool with the **Select by: Texture** box checked. The skeleton template objects all have a special texture assignment to make selection easy.

Once the skeleton template objects are selected, just press the 'Delete' key.

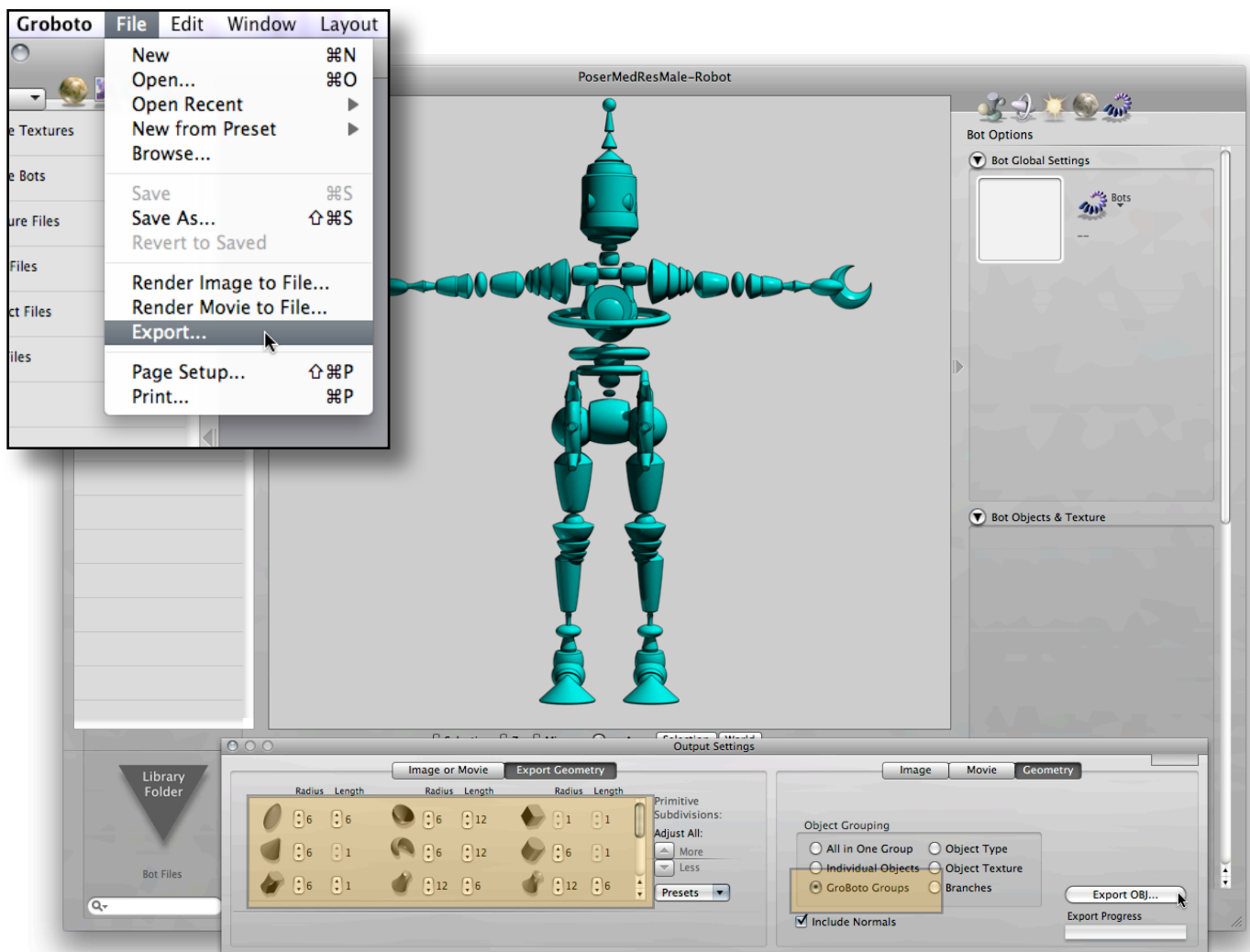Note: GroBoto version 3 will have Hide/Show and partial export options.

Fig. 1.3.2 — Export Settings.

After deleting the skeleton template objects, you will be left with just your figure's geometry. This is a good time to save your GroBoto model.

- Select **File/Export** from GroBoto's main menus. This will bring up the **Output Settings** window.
- Set **Object Grouping** to **GroBoto Groups**.
- Set your **Primitive Subdivisions**. Subdivisions can be anything you like depending on how smooth you want curved forms to be in Poser, and how much bending you think you'll need in Poser (see page 4).
- Click the **Export Obj** button.
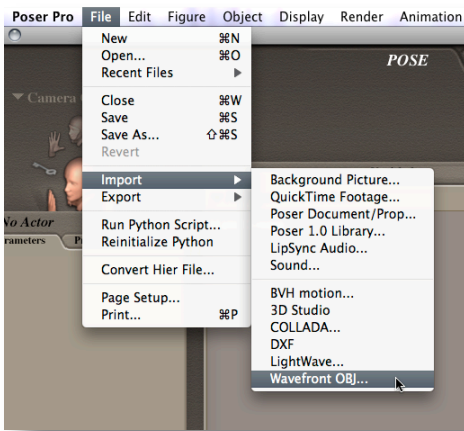
2. Importing & Setup in Poser

2.1 Importing your GroBoto Figure

Launch Poser.

Select and delete the default figure (if there is one).

Use the **File/Import/Wavefront OBJ** menu item to load your exported GroBoto file.

Check the **Place on floor** box in the **Import Options** window. All other settings should be left in their default states (as shown in fig. 2.1.2.

After clicking OK, the file will import, and you will see your figure in Posers **Preview** window.
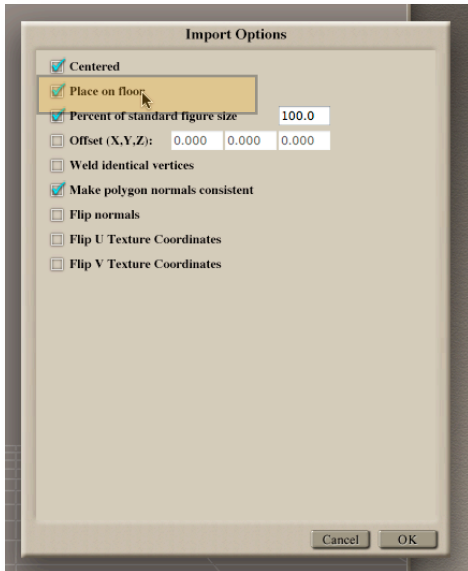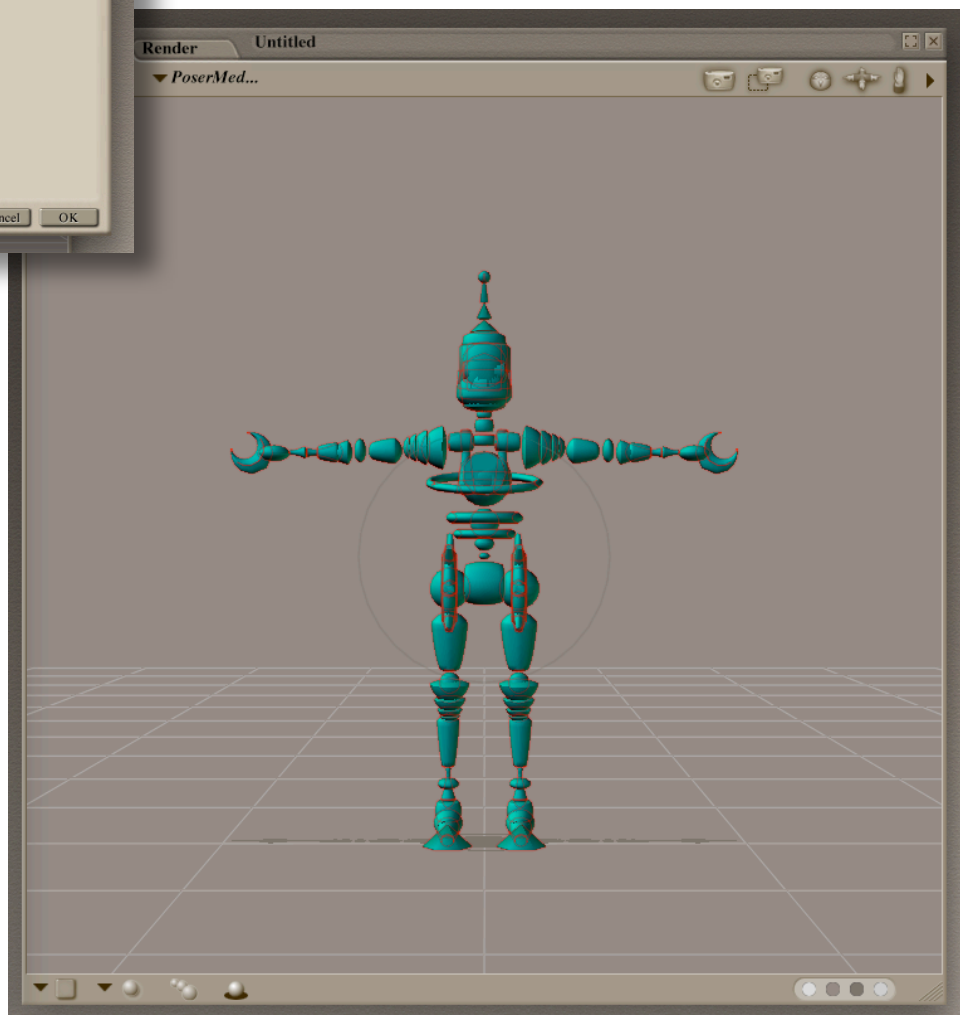

Fig. 2.1.2 — Import Settings
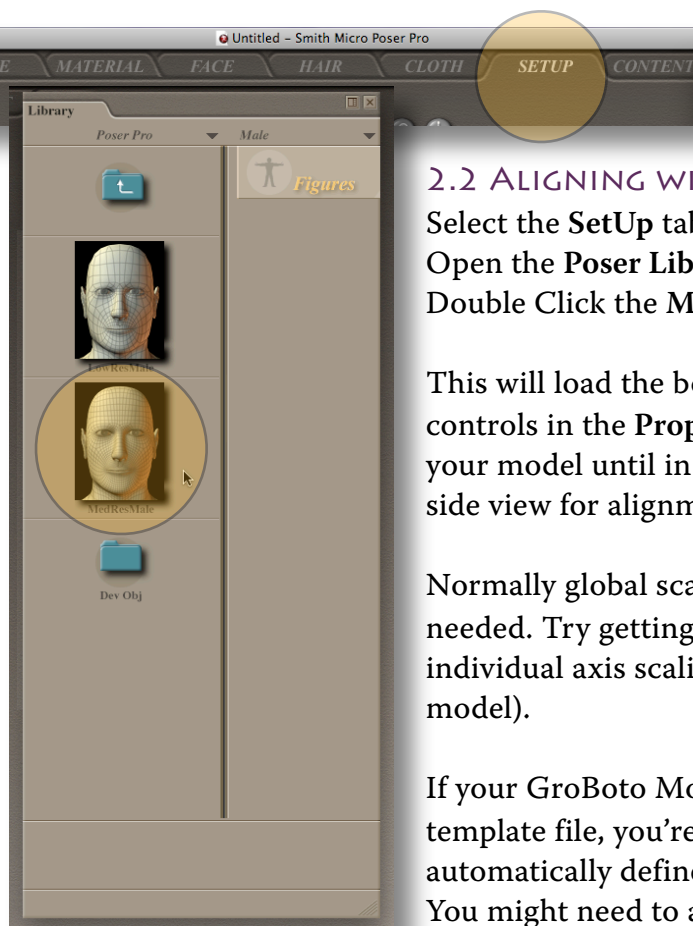

Fig. 2.1.3 — Imported Model.

Fig. 2.2.1 — Loading the MedResMale Skeleton

2.2 Aligning with the Skeleton

Select the **SetUp** tab.

Open the **Poser Library palette**, and navigate to the **Figures** category. Double Click the **MedResMale** item.

This will load the bones related to that figure. Use Poser's **Transform** controls in the **Properties/Parameters palette** to scale and reposition your model until in matches up with the bones. Be sure to check the side view for alignment.

Normally global scaling and a bit of Y and Z translation are all that's needed. Try getting as close as you can with those controls before any individual axis scaling (to avoid unnecessary distortion of your model).

If your GroBoto Model's elements are very similar to those in the template file, you're done. The imported group names have automatically defined the relationships between bones and geometry. You might need to adjust the length or settings of some of the bones and joints, that will become apparent when you try some posing. See your Poser manual for details.
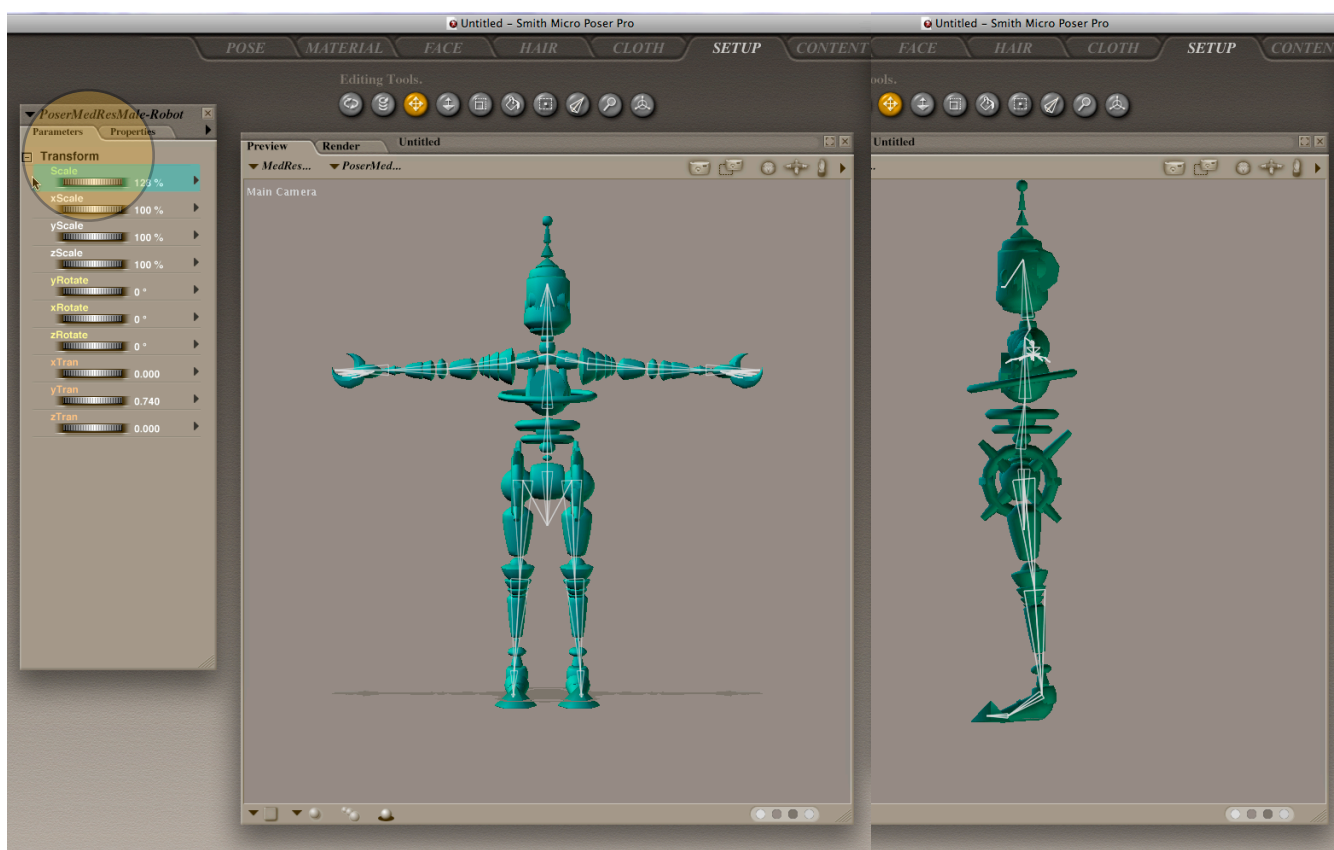

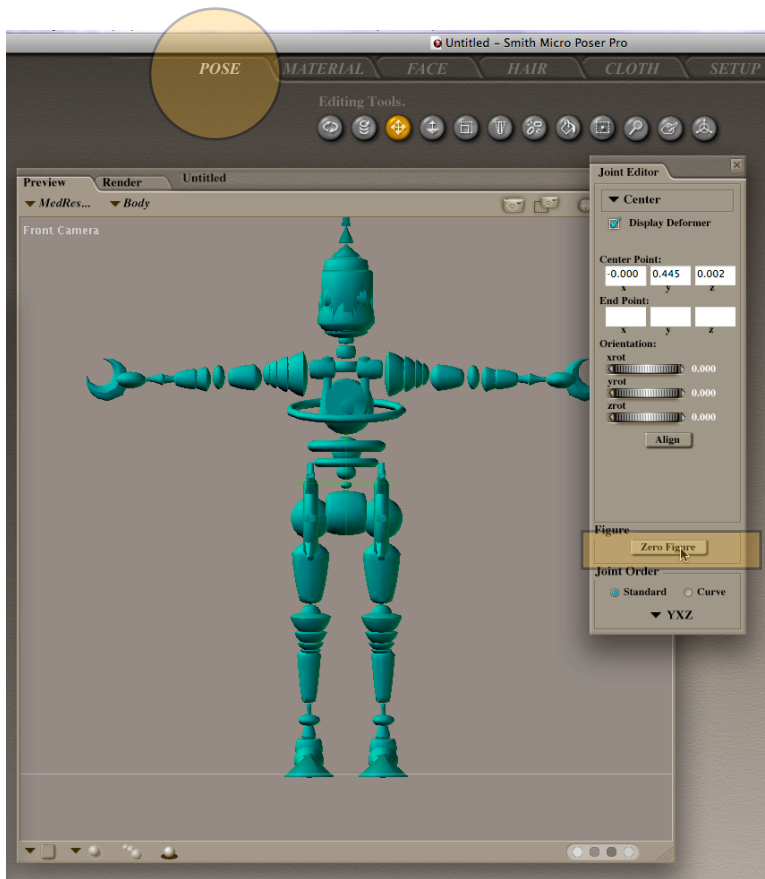Fig. 2.2.2 — Aligning the model to the skeleton.

Fig. 2.3.1 — Checking the Figure.

Fig. 2.3.2 — Testing a Pose.

2.3 Testing and Tweaking

Select the **Pose** tab.

If you see an alert warning of some geometry not being assigned to any bone, then you missed something in the GroBoto setup. You'll need to go back to your GroBoto file and confirm that all primitives have been assigned to the correct bone group.

Open the **Joint Editor palette** and click the **Zero Figure** button. If your figure does not end up in the classic 'T' pose (fig 2.2.1), yo may have some miss-assigned groups. Again, you'll need to go back to your GroBoto file and check group assignments.

Once everything checks out, it's simply a matter of adjusting your **Joint Attributes** to get the kind of movement and bending you desire.
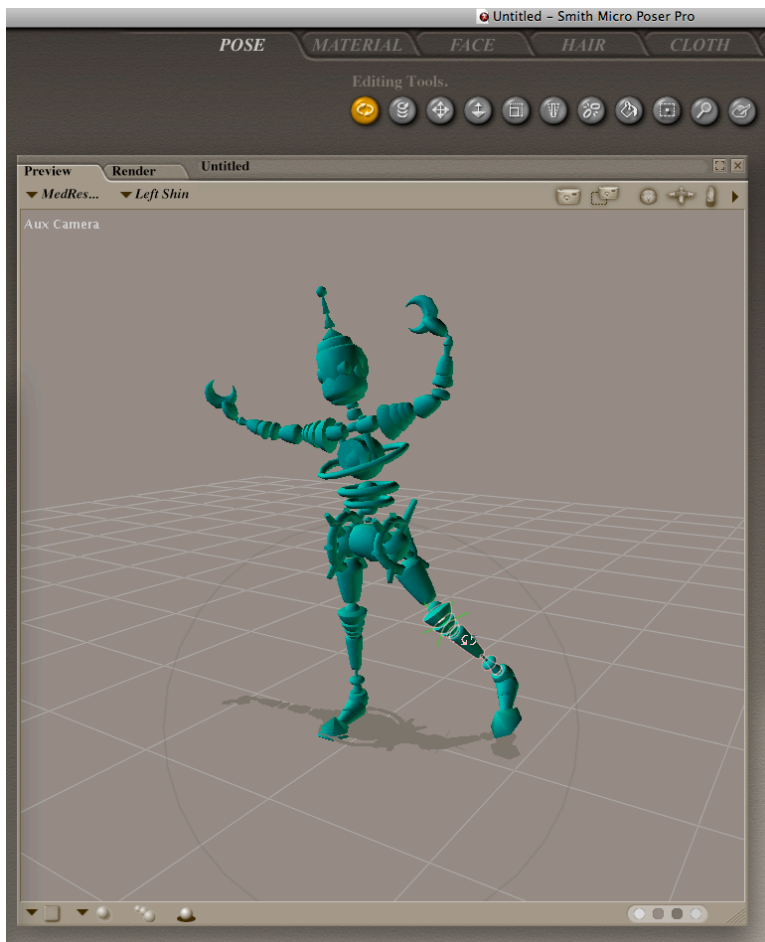
Since GroBoto models are composed of many discreet geometric elements — as opposed to a single 'shell' or 'skin' — the Joint settings may have different requirements. Limiting the **Inclusion & Exclusion Angles** may be useful... or even disabling bend in the **Properties/ Parameters** palette entirely for some parts. Please see your Poser documentation for details.

There is a lot more to explore — including using GroBoto to create Poser Morph Targets. That can add a nice layer of complexity to your models motion.

We plan on offering some tips and samples for that and other GroBoto/Poser Synergy soon.