POSER 3™

Advanced Techiques Guide
for Macintosh and Windows

MetaCreations

The Visual Computing Software Company

WELCOME TO THE
ADVANCED TECHNIQUES GUIDE.

ADVANCED POSING AND ANIMATION

ADVANCED BODY SHAPING.

CREATING POSER FIGURES.

USING POSER 3 WITH OTHER APPLICATIONS.

WELCOME TO THE ADVANCED TECHNIQUES GUIDE.

Poser 3 is an easy-to-use figure design and animation tool. With Poser 3 you'll produce lifelike 3D illustrations and animations of human figures in action—dancing ballet, climbing a cliff, meditating, even walking.

Poser 3 is great for anyone who wants to add realistic human and animal figures to an art project. It's a welcome companion to your favorite graphics, illustration, 3D, animation, and multimedia applications.

This guide described the advanced features of Poser 3. It covers topics like adding Morph Targets to body parts, creating new figures and using Poser 3 with other applications.

ABOUT YOUR USER GUIDE.

This manual provides all the information you'll need to get the most out of Poser 3. It helps you learn the application and serves as a reference, as you attempt more sophisticated procedures.

This guide assumes you are already familiar with basic Macintosh® and Windows® concepts—menus, dialogs, and mouse operations, such as clicking and dragging. If you need more information on these subjects, or on the Macintosh Finder or the Windows desktop, refer to the Macintosh User's Manual or the Microsoft Windows User's Guide, respectively.

It also assumes that you know how to use the basic features of Poser 3. If you're not, Poser 3 read "Poser 3 Basics" in the Poser 3 Users Guide, and then complete the "Tutorial" in the same manual. This tutorial leads you through the basics of posing and other key operations you'll need to use Poser 3 effectively.

After you've completed the tutorial, open up a new file and start posing a figure from the preset poses in the Libraries palette. The new interface makes experimenting incredibly easy.

Conventions.

The Poser Users Guide is for both Macintosh and Windows. By convention, Macintosh commands precede Windows commands in the text. For example, Command/Ctrl+I, is equivalent to the Macintosh Command-I and the Windows Ctrl+I. For simplicity, the term "folder" refers to directories as well as folders. The Poser interface for Macintosh and Windows platforms is identical, unless otherwise specified.

There are also several conventions used to identify paths to certain tools and controls. The convention to a menu follows the rules of the **menu name> menu item**. The convention to a palette follows the rules of the **palette name**: **subpalette name**. The convention to a palette menu follows the rule of **palette name: palette menu> menu item**.

Modifier Keys.

When a modifier key differs between the Macintosh and Windows platform, the Macintosh modifier is listed first followed by a slash and the Windows modifier key. **Option**/**Alt** means Macintosh users press the **Option** key and Windows users press **Alt**.

CUSTOMER SUPPORT.

Technical support is free* to registered users of Poser. There are many easy ways to contact technical support for questions about installation, configuration or functionality. These options are Web, e-mail, phone, and fax support.

* MetaCreations does not currently charge for technical support for Poser. The only expense to the user is telephone toll charges.

You'll find the answers to most of your questions within the pages of this User Guide. If you need further assistance, you can contact MetaCreations's Technical Support in any of the following ways:

WEB SUPPORT.

Many of the answers to your questions are available 24 hours a day on our Web site:

http://www.metacreations.com/support

In addition to frequently asked questions (FAQs), the Web site provides troubleshooting techniques, late breaking product news, and other resources to help you get the most out of Poser.

E-MAIL SUPPORT.

To answer your technical support question most effectively and quickly, please use the e-mail form provided to you on our Web site:

http://www.metacreations.com/support

PHONE SUPPORT.

Phone support hours are Monday–Friday, 8:00 AM–5:00 PM Pacific Standard Time, excluding holidays.

Call (408) 430-4061. When calling, please have your serial number handy and be at the computer where you need assistance.

FAX SUPPORT.

Dial (408) 438-9672 to send a fax.

Please include your name and serial number on all correspondence.

MetaCreations reserves the right to change its support policies at any time.

WHO IS METACREATIONS?

MetaCreations is a major force in 2D and 3D graphic software, developing and marketing next generation products that unite traditional art, and design techniques with digital technology. MetaCreations products are engineered to deliver real-time interaction, intuitive functionality, and creativity to design professionals, graphics hobbyists, and consumers who work on desktop computers.

MetaCreations' focus is maintained by three product values:

- Faithfully replicate Natural-Media and real world looks in the digital medium.
- Facilitate and extend the range of creativity by allowing artists to do things they couldn't do before.
- Capture human expression and allow the artist's perspective and intent to show through.

FOR MORE INFORMATION.

For more information about MetaCreations' products, see our Web site on the Internet:

http://www.metacreations.com

ADVANCED POSING AND ANIMATION

AUTO BALANCE AND POSING.

The Auto Balance feature can be a valuable tool for creating realistic poses. When the feature is enabled, Poser 3 calculates what the mathematical "weight" for a figure is and then tries to maintain it. In this mathematical model, there is more weight in the hip or center portion of the figure, than there is in the upper torso.

As you move figures, Poser 3 automatically adjusts body parts to attempt to maintain the original weight distribution. This results in more natural looking poses, without the need to make several position adjustments.

Fig. 1—Example of posing using Auto Balance.

When posing using Auto Balance, small, subtle motions result in better poses, than do large motions. Large motions may create drastic results. When this happens, use the Restore feature to reset the position of body parts.

To enable the Auto Balance feature:

⌘ Choose **Figure menu> Auto Balance**.

MOTION CAPTURE AND ANIMATIONS.

Poser can read stored motion capture files, known as Biovision or BVH files. These files let you apply stored human motion to your 3D models. BVH files create incredibly realistic motion without you having to set up a large number of keyframes.

BVH files are created using motion-capture hardware. Reflectors are attached to a person's joints. As the person moves, the position and rotation is captured in 3D space at different points in time. Each point of time is then keyframed together to create a smooth animation. Since this process creates literally thousands of keyframes, there is no interpolation needed to create smooth motion.

Importing and Exporting Motion Capture Files.

BVH files can be imported and exported like any other file type. Sample BVH files are stored in the **Coolstuffinhere!:motion capture** folder on the Poser 3 CD-ROM.

To import a BVH file:

1. Choose **File menu> Import> BVH motion**.

   The Import dialog appears.

2. Locate the desired file and choose Open.

To export a BVH file:

1. Choose **File menu> Export> BVH motion**

   This may take several minutes, depending upon the complexity of the file.

Setting the align axis.

You can set whether the figure's arms are aligned to the X or Z axis during the import process. The align axis is determined at the time of recording. It's important to choose the right axis or else your figures look incorrect.

To determine the correct axis for the BVH files on the Poser 3 CD-ROM, read the Biovision README or the House of Moves README. If you're using other BVH files, you'll need to contact the developer of the motion capture data with which you are working.

Editing keyframes.

The BVH keyframes are applied to the current figure when imported. You can edit BVH keyframes as you would any other animation.

Fig. 2—BVH file in the Animation palette.
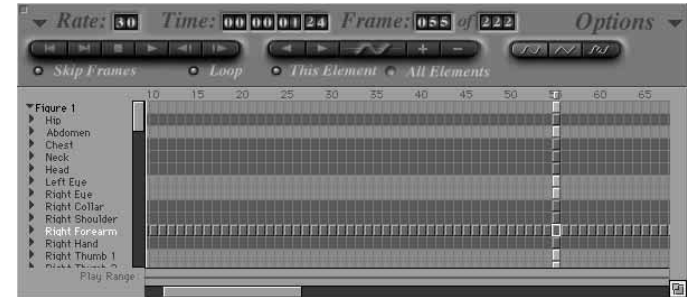
ADVANCED BODY SHAPING.

MORPH TARGETS AND JOINT PARAMETERS.

Besides the basic body shaping tools like the Scale and Taper tools, Poser 3 provides two features for customizing the shape of figures: the Morph Targets and Joint Parameters palettes.

Morph targets let you add an additional parameter to a body part that lets you gradually reshape it. Joint Parameters lets you set up how the joints in your figure move.

MORPH TARGETS.

One of the most powerful new features in Poser 3 is the ability to add user-defined Morph Targets. Morph Targets are transitional changes in the geometry of the figure that can be animated over time.

The figure's geometry can move from the original shape of the model to the geometry of the morph target. During the course of an animation, the model begins to change shape until it reaches the morph target geometry.

Fig. 3—A Morph Target used to alter figure geometry.
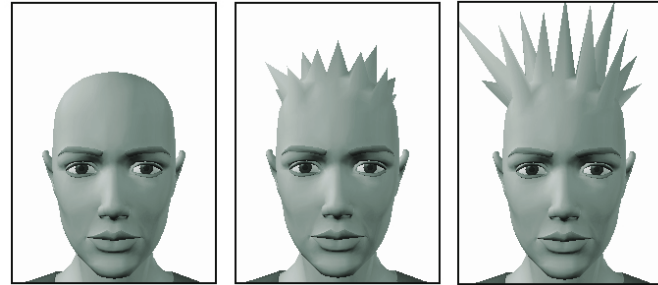
If you want to see an example of how Morph Targets are used, take a look at the Head parameters of a Poser 3 People figure. All the facial parameters, like Mouth and Tongue settings were created using Morph Targets.

SETTING UP MORPH TARGETS.

Morph Targets are assigned to individual body parts. When you set up a Morph Target, a new parameter dial is added to the body part's parameters. The dial lets you control the amount of morphing applied to the body part.

In order to add a morph target, you need to create a morph target geometry. This geometry represents the end-point of the morphing. The morph target geometry must contain the same number of vertices as the original body part, that's why you'll usually use the original body part as a starting point.

A Morph Target geometry can be created in any 3D modeling application that allows you to save a file in OBJ format. The morphing tutorial later in the this chapter uses Ray Dream Studio to create a Morph Target geometry.

To add a Morph Target in Poser:

1. Select the body part to which you want to add a morph target.

2. Choose **Edit menu> Properties** to display the Properties dialog.

Fig. 4—Element Properties dialog.
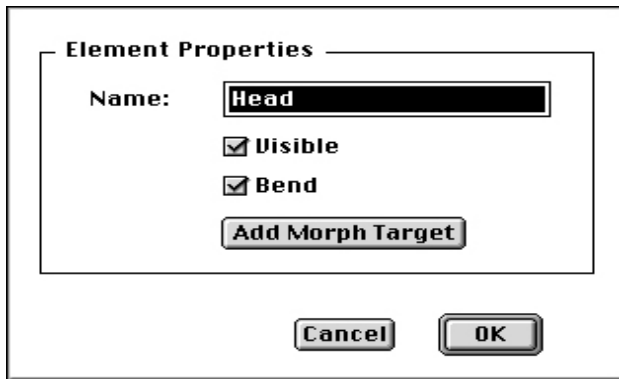

3. Click Add Morph Target.

The Add Target dialog appears.

Fig. 5—Add Shape Interpolation Target dialog.
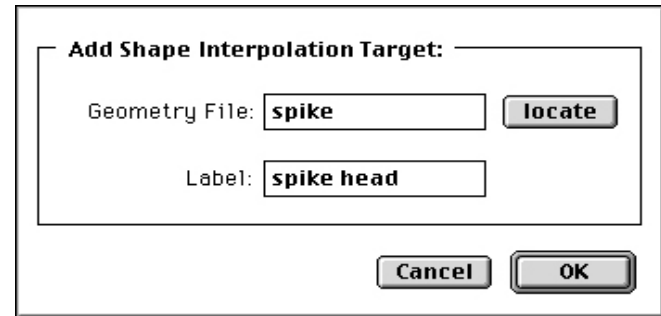
4. Click Locate to find the geometry file you want to use as a morph target.

    The name of the file appears in the Geometry field. The file must be in OBJ format with the same number of vertices as the original body part.

    Do not use a file of the entire figure. The file should contain only the body part you are morphing.

5. Enter the name you want to attach to the parameter dial that controls the morph. This dial is added to the parameter dials list for the selected body part.

6. Click OK to return to the Element Properties dialog. Click OK again to return to the main window.

    A new dial is added for the selected body part. Use this dial to morph the body part from its original shape to the morph target. A value of 0.0 for this dial is the original object. A value of 1.0 completely changes the body part to the morph target. A value of 0.5 is a hybrid halfway between the original object and the morph target. You can also use negative values to invert the vertices.

MORPH TARGET TUTORIAL.

This tutorial uses Ray Dream Studio 5 to create a Morph Target for the head of one of the figures. You'll make the nose grow like Pinocchio's. Instead of Ray Dream Studio, you can use any application that lets you edit geometries and save files as OBJ.

Important: For this tutorial to work correctly, you must have installed the new obj import/export plug-in and mesh form modeler for Ray Dream Studio 5.0.2 which is included with Poser 3.

To load a figure geometry into Ray Dream Studio 5:

1. Launch Ray Dream Studio 5.

2. Choose **File menu> Open**.

3. Click the Format popup and choose Wavefront OBJ.

4. Select the folder **Poser 3: Runtime: Geometries: newMaleCasHi**.

5. Select the file newMaleCasHi.obj and click on Open.

6. Use the default settings for the OBJ import dialog and click OK.

The figure loads into the perspective view and into the timeline with the name lFoot.

Fig. 6—The newMaleCasHi geometry, as shown in the Perspective window.
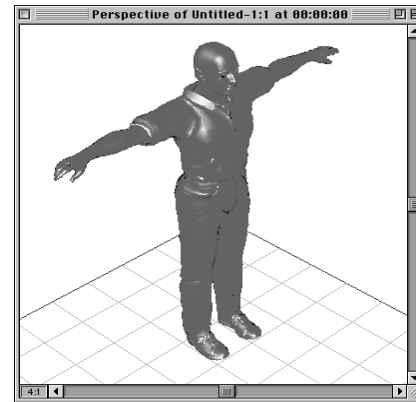
To edit the figure's geometry:

1. Select the figure newMaleCasHi in the Timeline.

2. Double-click the figure in the perspective window to jump into the mesh form modeler.

You can also select the object, then choose **Edit menu> Jump In**.

Fig. 7—The newMaleCasHi geometry, shown in the mesh form modeler.
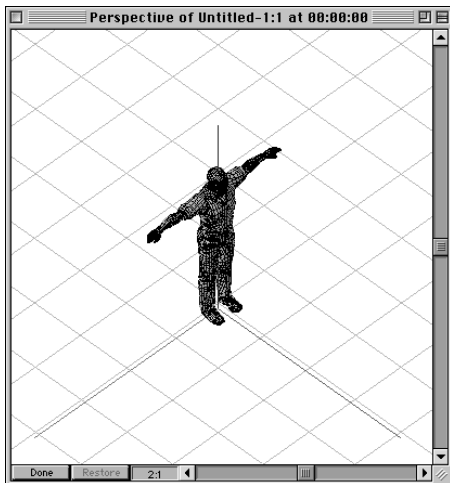
3. Click OK

   If the name dialog appears, use the default name.

4. Click the Selection tool.

Fig. 8—The Selection tool.

5. Click away from the object to make sure there are no vertices selected.

6. Double-click within the head of the figure.

The entire head is selected. This may take a while due to the large number of polygons you are loading, but you're about to remove all but the head.

Fig. 9—The newMaleCasHi figure with head selected.
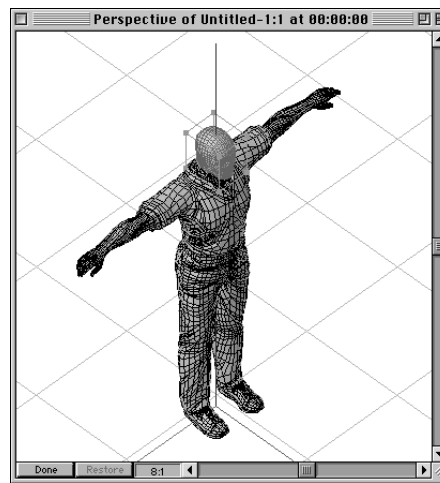
7. With the head selected, choose **Selection menu> Invert** to select everything but the head.

8. Press the delete key.

Fig. 10—The newMaleCasHi geometry with the body deleted.
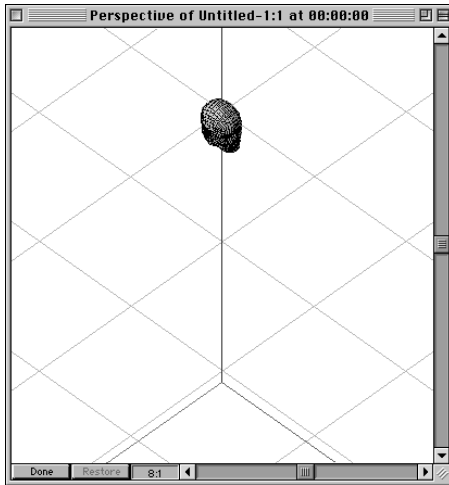
9. Click the Zoom tool.

Fig. 11—The Zoom tool.

10. Drag a marquee selection around the head.

Fig. 12—Enlarged view of the head.
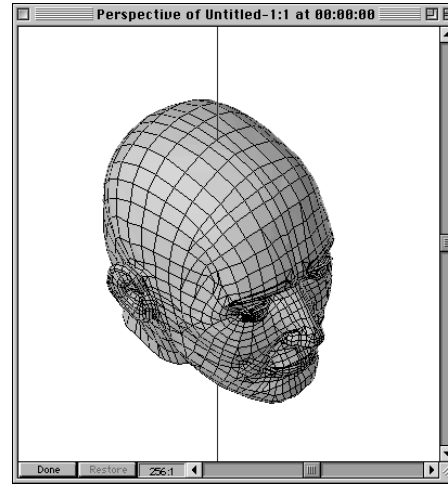
11. Choose **View menu> Preset Position> Left.** This switches to the left view, which can make the model easier to deform.

Fig. 13—Left view of head.
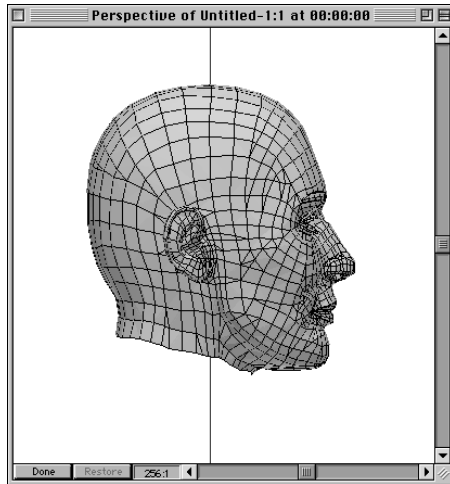
To deform the geometry:

1. Click the sphere of attraction tool.

Fig. 14—The Sphere of Attraction tool.

The default size, 4 inches, is much too large for any poser figures. Compared to standard Ray Dream Studio units, the poser figures are very small. It is important however not to change the size of the geometry other than in the manner you want to morph it.

If, for example, you increase the size of the entire head, that size increase is included in the morph calculations in Poser. This is also true of the position relative to the center. In some cases, that may be the effect you are seeking. In this case, however, you want only to increase the size of the nose.

2. If the Properties palette is not already open, choose **Windows menu> Properties**.

Fig. 15—The Properties palette with the Tools tab displayed.
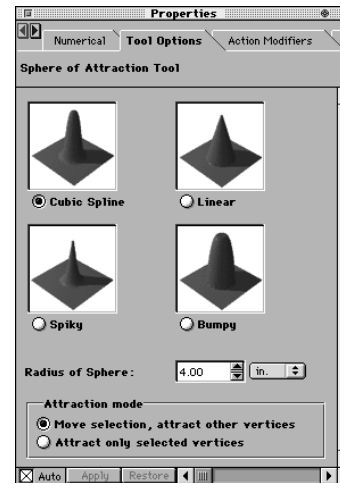
3. Change the units for the Radius of Sphere setting from inches to millimeters.

4. Change the Radius of Sphere value to 1 millimeter.

5. Use the sphere of attraction tool on the tip of the nose and drag to the right. You have now created a morph target.

Fig. 16—The deformed newMaleCasHi head.
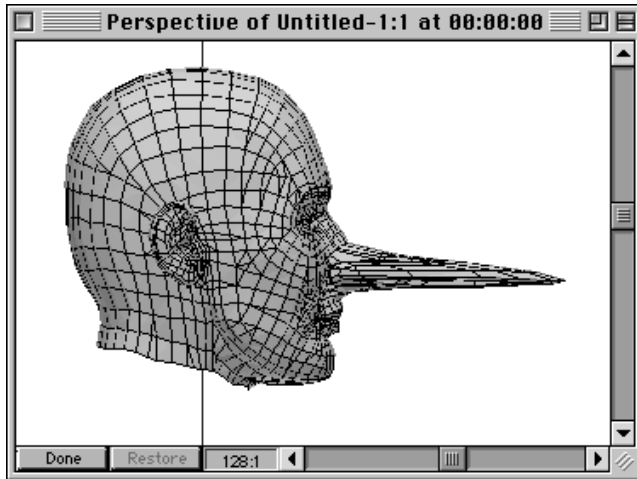
6. Click on the Done button.

To save the new morph target file:

1. Choose **File menu> Save As**.

   The Save As dialog appears.

2. Change the file type to Wavefront OBJ.

3. Change the name to nosemorph.obj and save the file within the same folder as the original, newMaleCasHi.

4. Click OK.

   A dialog appears warning you that saving out of Ray Dream Studio format may result in loss of information.

5. Click OK to continue.

6. Choose **File menu> Close** to exit Ray Dream Studio.

To add a morph Target in Poser:

1. Launch Poser 3.

2. Display the Libraries palette, by clicking the handle on the right side of the screen.

Fig. 17—The Libraries palette.

3. Click the Figures category button.

4. Click the sub-category pop-up and choose People, if it's not already selected.

Fig. 18—The People sub-category.

5. Double-click the Casual Man preview.

The figure appears in the Document window.

Fig. 19—The Casual Man in the Document window.
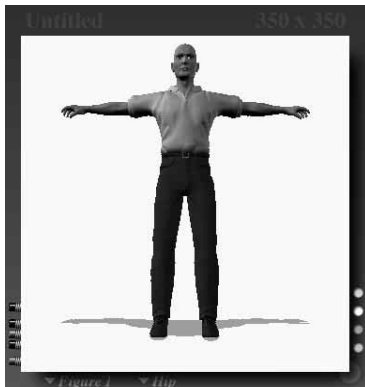
6. Close the Library window.

7. Click the Face Camera icon in the Camera Controls.

Fig. 20—The Face Camera icon.

8. Select the Head, and choose **Edit menu> Properties**.

The Properties dialog appears.

9. Click the Add Morph Target button.

The Add Shape Interpolation Target dialog appears.

Fig. 21—The face of the figure.

10. Click on the Locate button.

11. Select the file **Poser 3: Runtime: Geometries: newMaleCasHi: nosemorph.obj**.

12. Click Open.

13. Change the label field to Nose. This assigns the name "Nose" to the new parameter dial.

14. Click OK twice to exit the Properties dialog.

15. Use the rotation trackball to rotate the view slightly to the left or right.

Fig. 22—A rotated view of the figure.
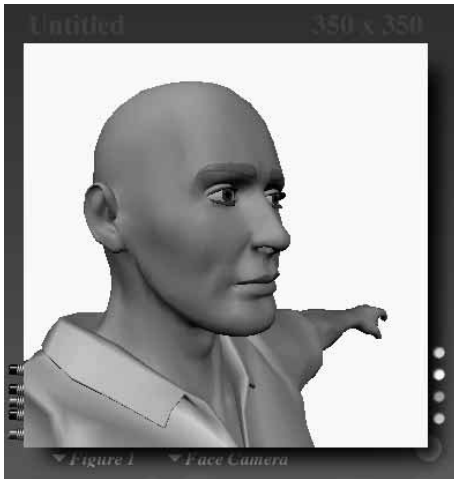
16. Click the Current Element popup

17. Choose Head.

18. You can now use the Nose dial to morph the Nose. Drag it to the right towards 1.0 for an interesting effect.

Fig. 23—The Nose after morphing.
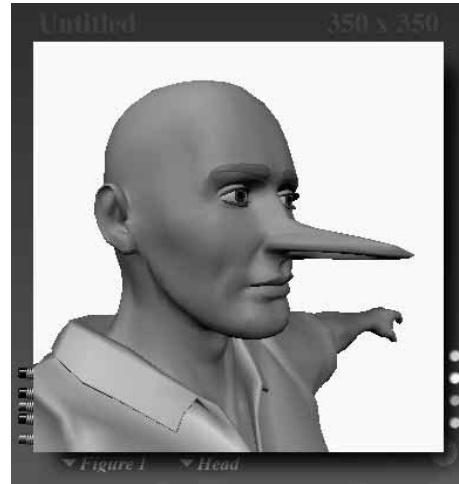
FIGURE JOINTS AND BLEND ZONES.

The joints on a figure control how parts bend, blend, twist, and bulge. Realistic movement in a figure is controlled by joint settings. For example, a human knee joint can't bend forward.

Fig. 24—An example of figure joints.

The bending and twisting motion in a figure is created by using transformers. Transformers stretch, skew, or scale polygons in the transformation zones to produce desired joint motion.

The transformation zone is defined by the inclusion and exclusion angles that are assigned to each transformation. Polygons within the exclusion angle are not effected by a transformation. Polygons within the inclusion angle are affected. Polygons in the area between the angles, called the *Blend zone*, are adjusted to create a smooth transition between the surrounding polygons.

Fig. 25—An example of blend zones.
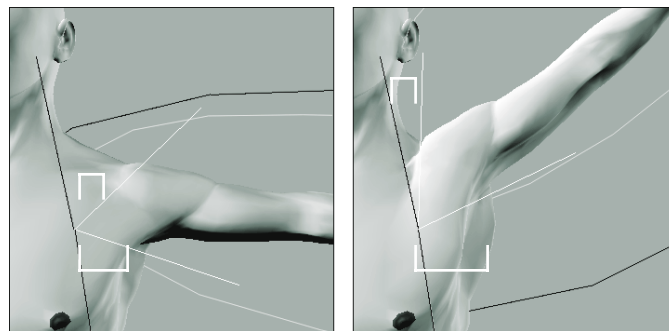
Joints are controlled using the Joint Parameters palette. Blend zones are edited each time you adjust the transformation inclusion and exclusion angles. Blend zones can be further refined using the Spherical Falloff zones.

EDITING JOINT PARAMETERS.

The Joint Parameters palette lets you control both joints and blend zones. It lets you directly manipulate joints and blending transformers to set how a joint works. These advanced settings can be used in different ways:

• Fine tune the bending of existing figures to suit your needs

• Create new types of effects, such as imitating 'Plastic Man' from the Fantastic Four comics

- Customize joints and transformers for entirely new figures, imported with the Convert Hier File command. Refer to "Creating Figure Models." on page 23 for more information about how to create your own Poser 3 figures.

Fig. 26—The Joint Parameters palette.

Before making any changes with the Joint Parameters, be sure to turn all IK Chains off. It is also easier to see some attributes, such as the center, if you view them in outline or wireframe display mode. If your computer is fast enough, use Full Tracking to see the results of your changes in real-time.

Each joint on the figure has a set of attributes, like Bend, Twist or Side-to-side. The attributes available for editing depend upon which joint is selected. Editable attributes are displayed in the pop-up at the top of the palette.

To edit a joint's parameters, you first select a joint attribute and then set each of its parameters. Each attribute has a specific set of parameters that control how the attribute affects the joint. For example, the parameters for the Center attribute let you control the exact position of the center point.
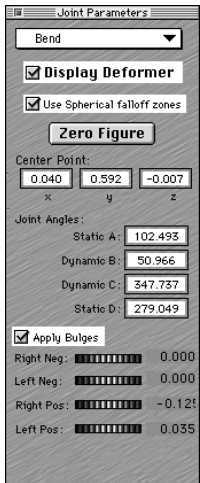
To display the Joint Parameters palette:

⌘ Choose **Windows menu> Joint Parameters**.

The controls available on the palette depend on the currently selected body part or prop.

To edit a joint parameter:

1. Select a body part.

2. Display the Joint Parameters palette.

3. Click the popup at the top of the palette and choose an attribute.

4. Set the attribute's parameters.

USING THE JOINT PARAMETERS PALETTE.

The Joint Parameters palette contains several controls you can use to set attributes for a joint. These controls change as you select different body parts. However, here are a few controls that are common to all:

Display Deformer: Toggles the graphical display of the joint on the figure.

Zero Figure: Resets to 0 the rotation (Bend, Twist, Side-Side, Front-Back) for all body parts.

Use Spherical Falloff Zones: Toggles on or off the Spherical Falloff Zones on the figure. Refer to for more on falloff zones. The Use Spherical Falloff Zones control appears on all attributes except the Center attribute.

INTERACTIVELY EDITING JOINT PARAMETERS.

When you select a joint attribute in the Joint Parameters window, a graphical representation of the parameter appears on the figure. For example, when you select the Twist attribute for the leg, a red and green line appears on the leg.

Center.

The center of a body part becomes the outline of the selected target when you can edit it.

Twist.

When you select the Twist attribute, a line with two handles appears on the figure. The red handle represents the starting point of the twist transformation area. The green handle represents the end. Dragging these handles increases or decreases the Twist area.

Fig. 27—A Twist attribute displayed graphically on the figure.
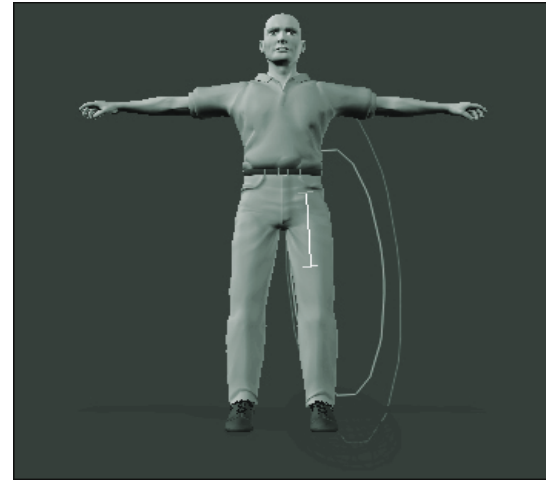
Editing Inclusion and Exclusion angles.

When using Bend or Side to Side/Front to Back, the red line represents the exclusion angle, while the green lines represent the inclusion angle.

Any polygons within the exclusion angle are not affected by a transformation. Polygons within the inclusion angle are affected by the transformation. The area between the inclusion and exclusion angles is called the Blend zone.

You can edit theses angle by dragging their points directly on the figure. As you drag an angle, the figure updates to show the effects of your change. When the cursor is over an end-point, it appears as a target.

Inclusion and exclusion angles exist in three dimensions, so you can rotate the figure to see all the areas affected by the transformation. You can also edit the angles in all three dimensions.

If you want to make sure you're moving an angle in only one dimension, use the orthogonal cameras (From Top, From Front, From Left, etc.). For example, if you use the From Front camera, moving left and right moves in x. Moving up and down moves in y. In the From Left view, left and right move in z, and up and down move in y.

Bend.

You can adjust the Bend transformation area by dragging the end-points of the red or green angle. To change the center of the body part, drag the center point target.

Side-Side/Front-Back.

Both the Side-Side and Front-Back attributes can be edited like the Bend attribute, by dragging the inclusion and exclusion angle lines.

JOINT ATTRIBUTES.

Each joint on a body part has a number of parameters that together control how the joint moves.

Center.

The Center Attribute sets the center of rotation for a selected body part. This attribute is available for all body parts and props.

Fig. 28—The Center attribute in the Joint Parameters palette.
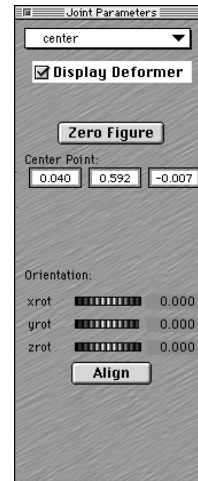
The Center attribute has the following parameters:

Center Point: Sets the XYZ position of the center of the body part. 0,0,0 is located in the center of the body on the floor.

Orientation: Sets the XYZ rotation of the axis. Click and drag on these dials to rotate the axis. You can alt-click on the dials to reset them to 0.

Align: Aligns the axis to the rotation of the body part.

Twist.

The Twist attribute alters the location of the twist transformer for each body part. The intensity of the transformation is controlled using the Twist Parameter Dial or Twist tool.

Fig. 29—The Twist Attribute in the Joint Parameters palette.

Note that there is not a Twist attribute for the hip, since the hip is the parent of the entire figure. Twisting the parent is the same as rotating the entire figure. When IK is enabled, twisting the hip transforms body parts included in the IK chains.

By default, the Twist axis runs lengthwise down the center of each body part. For example, for arms the twist axis is the x-axis, while for legs the twist axis is the y-axis. Moving and rotating the center of a body part can alter the position of this axis.

Fig. 30—The Twist axes on the body.
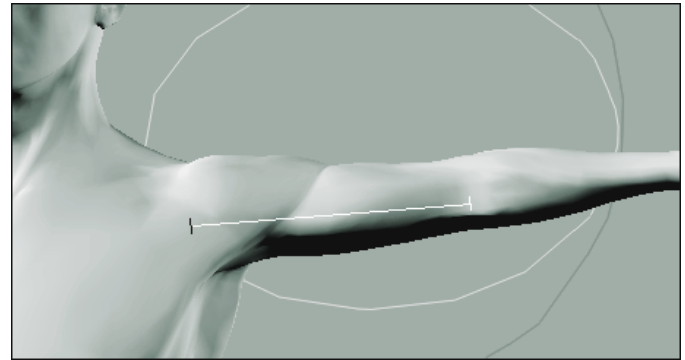
The Twist attribute has the following parameters:

Twist Start, End: Sets the start and end of a twist area on a body part. Only the parts of the figure within the twist area are affected by the twist transformation.

Twist areas can be set to larger than the body part to make a twisting motion appear more natural. In most cases, you want to include the body part's parent.

Bend.

The parameters for the Bend attribute alter the angles of the bend transformers and define how bulges are created.

Fig. 31—The Bend attribute in the Joint Parameters window.
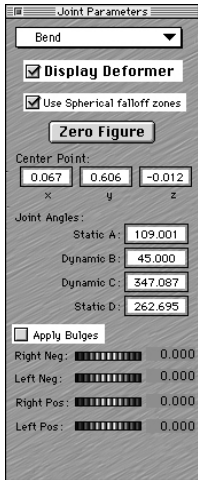
The Bend attribute has the following parameters:

Center Point: Sets the XYZ position of the center of the body part. Bending occurs at the center point. Changing that point changes the center of the body part.

Joint Angles: These parameters set inclusion and exclusion angles for the Bending transformation. The values in Static A and D together set the exclusion angle. Polygons within the

exclusion angle are not affected by the bending. The values in Dynamic B and C together set the area of inclusion. Polygons within the inclusion angle are affected by the bending.

Fig. 32—The angles of inclusion and exclusion on a body part.
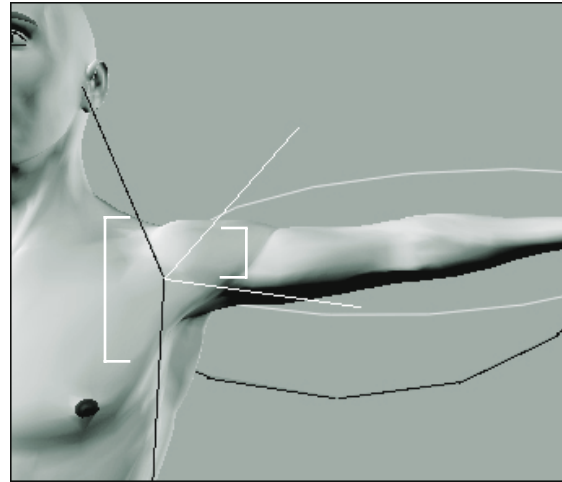
Apply Bulge: When enabled, these parameters control how polygons within the bend zone are stretched or pinched to create bulges or wrinkles.

Use the parameter dials to control the bulges. Right and left dials refer to the sides of the figure. Negative and Positive dials refer to negative or positive values for the rotation of

the attribute (i.e. a positive value for the Bend attribute would create bulges as set by the Right and Left positive bulge dials). You can alt-click these dials to reset them to 0.

Fig. 33—Differences in bulges and wrinkles, when the body part center is changed.
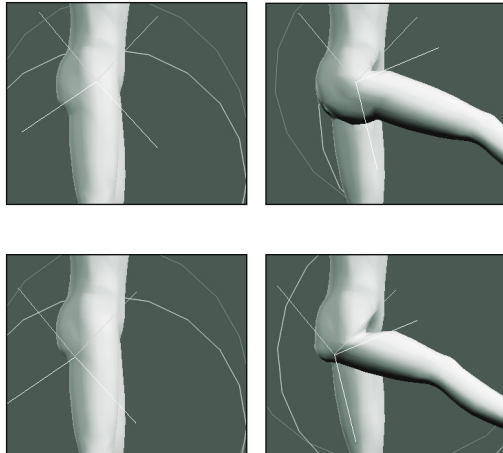
Side-Side/Front-Back

The parameters for the Side-Side/Front-Back attributes control angles of the Side-Side/Front-Back transformers and define how bulges are created.

Fig. 34—The Side-Side attribute in the Joint Parameters palette.
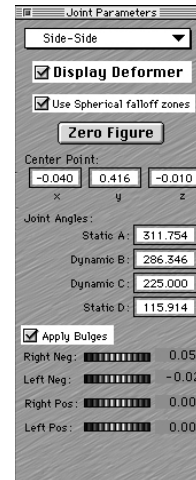
Fig. 35—The Front-Back attribute in the Joint Parameters palette.
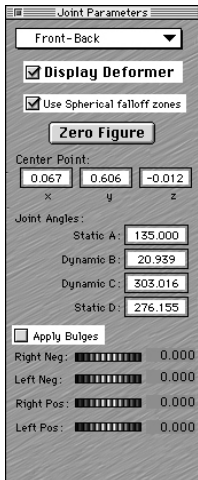
The Side-Side/Front-Back attributes have the following parameters:

Center Point: Sets the XYZ position of the center of the body part. Side-Side transformations occurs at the center point.

Joint Angles: These parameters set inclusion and exclusion angles for the Side-Side transformation.

Apply Bulge: When enabled, these parameters control how polygons within the Side-Side transformation zone are stretched or pinched to create bulges or wrinkles.

Scaling.

Each body part has parameters that let you scale the parent and child body parts. The settings are similar to the Twist parameters, and follow the Twist axis of the child or parent body part.

For example, the Right Collar body part of the Business Man has scaling controls for the chest (the parent body part) along the y-axis, and scaling controls for the Right Shoulder (the child body part) along the x-axis.

Fig. 36— Scaling attribute displayed in the Joint Parameters palette.
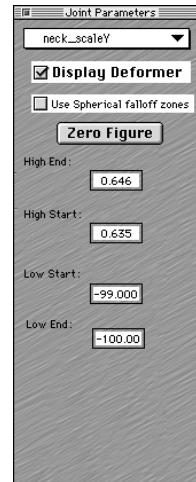
High Start/End, Low Start/End: The High and Low parameters define a blending area. For example, when scaling the head, you might also want the top of the neck to scale as well.

When setting this parameter, only one pair of settings—the high or the low setting—is relevant. The unused parameter pair is automatically set to an out-of-limit number (such as 100.000 or 99.000). This indicates that the pair is not relevant to the area you have selected for blending. The out-of-limit settings should not be edited.

Fig. 37— The effects of High/Low scaling.
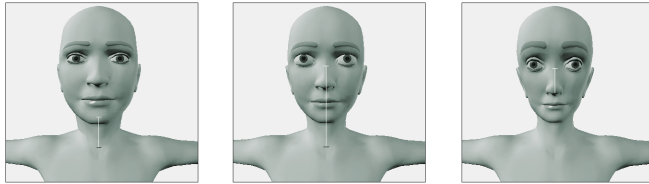
The end of each blending zone is represented in red, while the start is represented in green. The effects can be uniform, or can be controlled by spherical falloff zones. Refer to "Spherical Falloff Zones." on page 20 for more information.

Copying Joint Parameters.

You can copy joint parameters from one half of the figure to the other using the Symmetry commands on the **Figure menu**. Hold down the Option/Alt key while using the Symmetry commands to include joint parameters.

Saving Joint Parameters.

Changes to joint parameters effect only the current scene. If you want to save joint parameter changes, you need to either save your scene, or save the figure as a new preset in the

Libraries palette. The new figure has new joint parameter settings. Refer to "Poser 3 Basics in the Poser 3 Users Guide" for more about saving figures to the Libraries palette.

SPHERICAL FALLOFF ZONES.

Spherical Falloff Zones are an advanced method for controlling the blending between body parts. Two spheres, a green 'inner' sphere and a red 'outer' sphere represent the falloff zones.

Fig. 38—Spherical Falloff Zones.
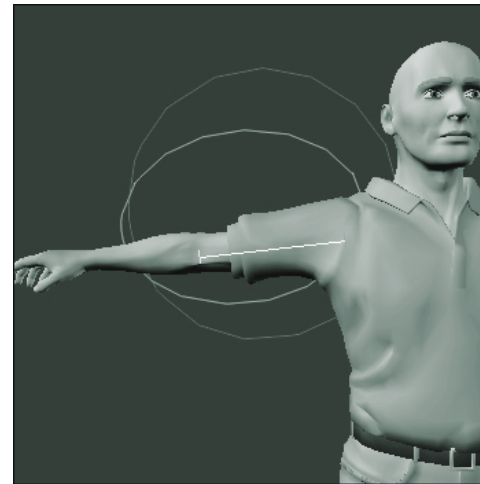
The green sphere defines the area that is effected 100% by the transformation. The red sphere represents the boundary of the transformer's effect. The area between the inner and outer sphere is the 'blending' zone. The effects of the

transformation gradually decrease from 100% at the boundary of the inner sphere to 0% at the boundary of the outer sphere.

When adding Spherical Falloff Zones, the default position of the sphere is 0,0,0.

Displaying Spherical Falloff Zones.

Spherical Falloff Zones can be selected and displayed using any display mode. Choose **Display menu> Element style** to select the desired display mode. The default display mode for these spheres is outline.

Wireframe mode lets you view the spheres in 3D and still see the body parts they surround.

Fig. 39—A Spherical Falloff Zone viewed in Wireframe mode.
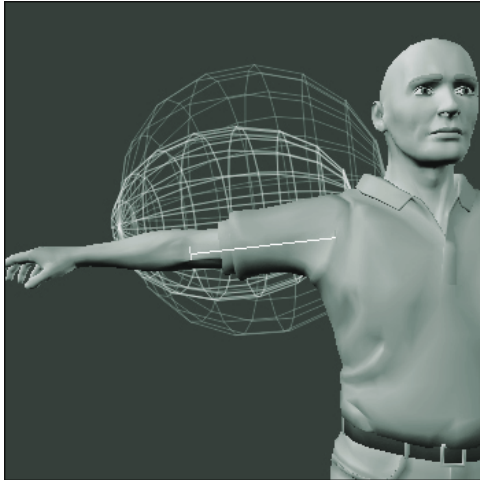
Editing Spherical Falloff Zones.

Spherical Falloffs can be edited using any of the Edit tools. You can reposition, scale, rotate or twist Spherical Falloff zones.

CREATING POSER FIGURES.

HOW DO YOU MAKE A NEW FIGURE?

A figure in Poser 3 is basically a 3D model that has separate parts for each moving limb. What makes a Poser 3 model unique is how it interacts with the controls in Poser 3. When a 3D model is in Poser 3, it has joints that move realistically. It seems to move like a real person.

Poser 3 created the ability to mirror real body movement by adding joint parameters to each body part. This allows you to then manipulate the figure based on those parameters. By using Parameters Dials and the Walk Designer you can create realistic motion.

To create your own Poser 3 figures, you must set up your model in a way that Poser 3 can understand. Once that is done, you can move or pose your model, just as you would any of the models that are included with Poser 3.

This chapter describes how to create articulated bending figures in Poser 3. The Tutorial starting with "Creating the Initial Figure." on page 34 leads you thorough the entire process step-by-step.

Figure creation is a multi-step process:

- Create a 3D model of the new figure.
- Create a hierarchy file for the figure.
- Convert the hierarchy file.
- Locate and use the new figure file in Poser 3.

- Verify the figure's hierarchy.
- Adjust the joint parameters of each body part.
- Set limits.
- Set favored IK angles.
- Store the default position.
- Set the surface materials for the figure.
- Add morph targets to individual body parts.
- Set part names
- Save the new figure to the Libraries palette.

CREATING FIGURE MODELS.

Almost any geometry that is made up of polygons and has individual parts can be used as a figure in Poser 3. What your model looks like makes no difference to how it works in Poser 3. It doesn't even have to look human, it just needs to be set up properly and stored in the correct format.

Once those two criteria are satisfied you can make anything into a Poser 3 figure. With the right set up, you can make anything from an accordion to a zebra into a poseable figure.

MODEL FORMAT.

In order to use geometry as a figure in Poser 3, it must be stored in a Wavefront (.obj) compatible format. As well, you must use only polygons to create you model. Nurbs or spline surfaces are not suitable.

GROUPING.

Poser 3 uses a group name as the internal name of a body part inside Poser 3. Some Poser 3 features, like the Walk Designer, require specifically named body parts. The group name is also the default name that you see when working with this body part (you can change that at a later time).

It's important that groups are set up to denote the individual moving sections. You can store body parts as individual OBJ files or save the entire figure as a single file. In either method, you need to carefully plan how you choose to separate the polygons into individual moving parts.

You *do not* need to move these parts to the origin individually. You should leave them where they naturally relate to one another. Local origins are set up later inside Poser 3.

When you store each body in a separate wavefront OBJ file you need have only one specified group in each file. That group contains all the polygons in that file.

When you store the entire body in one Wavefront OBJ, you must use "groups" to separate different parts of the body that represent the moving hierarchy. Saving the entire body in one Wavefront OBJ file is usually the preferred method.

It is *very important* that groups do not overlap. Wavefront grouping allows polygons to be in more than one group. If this happens, the overlapping polygons are duplicated when you bring the file into Poser 3, each group being turned into a separate Poser 3 body part.

For example, if you build a human-like object, you want to separate the polygons of the model into the following groups:

rHand lHand head neck lCollar rCollar chest abdomen hip rThigh lThigh rShin lShin rFoot lFoot rShldr lShldr rForeArm lForeArm

In order to use the figure in the Walk Designer you'll have to make sure that the above groups are used in the figure.

* Before creating a hierarchy file, import your OBJ file as a prop to check that the geometry is imported correctly.

Naming Groups.

In a Poser 3 figure file, there are actually two names applied to each body part. One name is used internally, the other is what the you see. It is important that certain body parts use standard internal names in order to be available for specific Poser 3 features. The user name (specified by the "name" line of actors) can be anything you wish.

The following body part names (therefore Wavefront group names) should be used when available:

* "rHand" -- for the body part that represents the base palm of the right hand
* "lHand" -- for the body part that represents the base palm of the left hand.

In order for the hand library features to work completely, the fingers of the hand should be broken up using the following names (working from root to tip):

rHand rPalm rKnuckles
rThumb1 rThumb2 rThumb3
rIndex1 rIndex2 rIndex3
rMid1 rMid2 rMid3

rRing1 rRing2 rRing3
rPinky1 rPinky2 rPinky3
lHand lPalm lKnuckles
lThumb1 lThumb2 lThumb3
lIndex1 lIndex2 lIndex3
lMid1 lMid2 lMid3
lRing1 lRing2 lRing3
lPinky1 lPinky2 lPinky3

Fig. 40—The hierarchy applied to the figure.
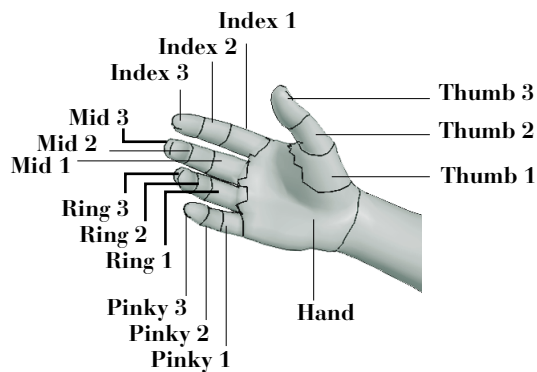
Arranging Groups on the Model.

When Poser 3 processes a new model's geometry and generates a Poser 3 Figure Library entry, it automatically adds bending joints between parent and child objects as specified in the hierarchy file.

Joints only bend polygons of the objects that are contained in the parent or child body part at any given joint. So, all polygons that are physically located at a seam must be

contained in either the parent object group or the child object group. In other words, don't have three groups joining at the same place.

A good rule of thumb to use when creating groups is: if two objects don't have a parent child relationship then they shouldn't be touching each other. It's important to make sure that groups are set up with this in mind, otherwise gaps appear when you start bending the model in Poser 3.

The following example shows the connection of the abdomen, hip, and upper leg of a horse. Since the abdomen is a child of the hip and the upper leg is also a child of the hip, there is no parental attachment between the abdomen and the upper leg. Therefore there can be no physical attachment between the abdomen and the upper leg:

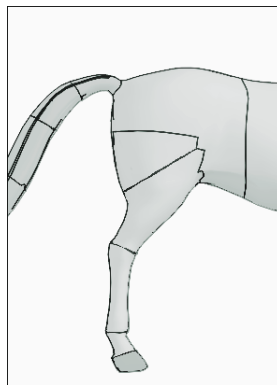*Fig. 41—The wrong way to connect groups on the horse.*

Fig. 42—Another example of the wrong way to place groups.

Fig. 42—Another example of the wrong way to place groups.
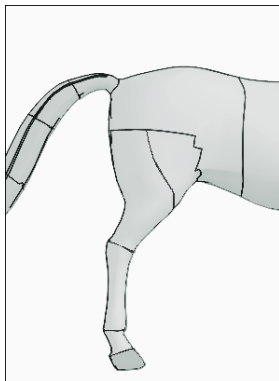
Fig. 43—The correct way of placing groups on the horse.
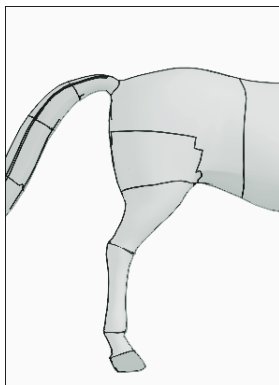
CREATING HIERARCHY FILES.

The Hierarchy file describes how the groups in a figure are arranged. It outlines the parent-child relationships between groups. Once created it can be imported into Poser 3 where it is converted to create a new figure file in the New Figures library.

The hierarchy file specifies four important things:

- The geometry (.obj) file to use.
- The hierarchical connections (parent-child relationships) of the body parts.
- The desired rotation order of each body part.
- A specification of each Inverse Kinematics chain to be included in the figure.

Hierarchy file can be created in any text editor that can save documents in a text-only format.

The following is an example hierarchy file: It represents the full hierarchy for a horse -- including curve channels for the tails.

objFile :Runtime:Geometries:horseHi:horseHiP3.obj

```
1 hip zxy
     2   abdomen zyx
        3 chest zyx
          4 lShldr yzx
             5 lUpArm yzx
               6 lForeArm yzx
                 7 lWrist yzx
                    8 lHand yxz
```

```
        4 rShldr yzx
          5 rUpArm yzx
            6 rForeArm yzx
              7 rWrist yzx
                8 rHand yxz
        4 lowNeck zyx
          5 upNeck zyx
            6 head yzx
    2 lThigh yzx
      3 lLeg yzx
        4 lShin yzx
          5 lAnkle yzx
            6 lFoot yxz
    2 rThigh yzx
      3 rLeg yzx
        4 rShin yzx
          5 rAnkle yzx
            6 rFoot yxz
    2 tail1 zyx curve
      3 tail2 zyx curve
        4 tail3 zyx curve
          5 tail4 zyx curve
ikChain   LeftLeg lThigh lLeg lShin lAnkle
ikChain   RightLeg rThigh rLeg rShin rAnkle
ikChain   LeftHand lShldr lUpArm lForeArm lWrist lHand
ikChain   RightHand rShldr rUpArm rForeArm rWrist rHand
```

There are more samples in the **Cool Stuff In Here!: Sample Files: Hierarchy Files** folder on the Poser 3 CD-ROM.

HIERARCHY FILE EXPLAINED.

The following section explains the various parts of the Hierarchy file.

Hierarchy File Header.

The first line of the hierarchy file contains the "OBJ File" command which specifies the location of the OBJ file associated with the new figure.

> objFile: Runtime:Geometries:horseHi:horseTex.obj

The file location should be defined using a Macintosh format file specification (i.e using colons). The file location is specified relative to the Poser 3 application folder.

When the hierarchy file is converted, the text of the OBJ file is read into Poser 3 where a geometry resource is created and linked to the OBJ file. This process results in a new figure file.

From then on, when Poser 3 uses this figure file, the geometry resource is used to defined the figure hierarchy relationships rather than the text stored in the OBJ file. Reading from the geometry resource is dramatically faster.

Hierarchy File Body.

The bulk of the hierarchy file contains lines similar to the one shown below:

Fig. 44—A typical Hierarchy file line.

2 abdomen zyx

Rotation Order

Body Part Name
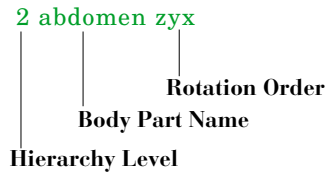
Hierarchy Level

The first part of the line indicates Hierarchy level, or the parent-child relationship, of the body part. In this case, the abdomen body part is a child of the body part of the part on the next level up. Hierarchy levels are numbered in depending order, so the next level up from this part is 1.

In the example below, the lShin object is located on the 3rd level of the hierarchy. The closest level 2 line above would be the lThigh, so the lShin is a child of the lThigh.

Fig. 45—Parent-Child relationships indicated in the Hierarchy file.

2 lThigh yzx ———————— Parent Object
3 lShin yzx ———————— Child Object
4 lAnkle yzx
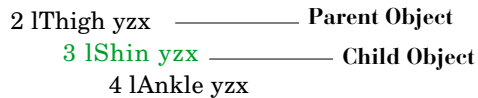
The indenting of the lines is not processed but is helpful visually to denote the hierarchy levels.

The second part of the line specifies the name of the body part. In the example the part is called abdomen. This name must match the group name in the OBJ file.

Fig. 46—The body part name in a Hierarchy file line.

2 abdomen zyx

Body Part Name

The 3-character string at the end of the line represents the rotation (or gimbal) order of the body part. A rotation order defined as "zxy" means that a Z axis rotation occurs first, followed by the X, then Y axis rotations.

Fig. 47—The rotation order in a Hierarchy file line.

2 abdomen zyx
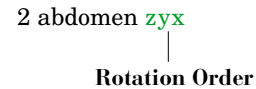
Rotation Order

Poser 3 uses the following XY and Z axis orientations:

Fig. 48—The X, Y, and Z planes that make up 3D space.

Assigning a rotation order is a three step process:

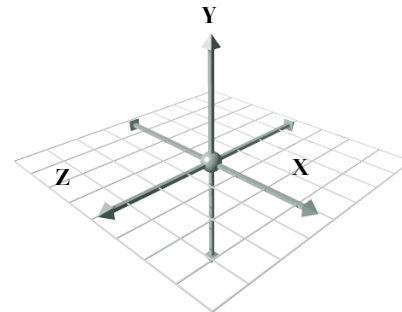- Always place the "twist" axis first. This axis should be placed lengthwise through the object. If the object, like a leg, is built down the Y-axis, specify the Y first since that is the axis along which the leg would twist.

- Of the two remaining rotations, place the one most likely to become 90 degrees last. This helps reduce rotation lock problems that occur when the middle rotation approaches 90 degrees.

- Place the remaining rotation channel second.

Some objects are built non-aligned to the major axes. In this case, you are able to "align" the coordinate system of the body part later, while adjusting the joint parameters. For the hierarchy file, pick the rotation order that seems closest to what would be desired. When you align the part later, the twist axis you choose becomes aligned down the length of the body part.

Linking body parts stored in separate OBJ files.

If each body part were stored in a separate file, rather than all body parts being groups in a single file, you would specify the full path name for the file at the end of each line. This path is relative to the Poser 3 folder.

Here is an example of three links using this method:

```
1 link1 yzx :Runtime:Geometries:examples:l1.obj
    2  link2 yzx :Runtime:Geometries:examples:l2.obj
         3 link3 yzx :Runtime:Geometries:examples:l3.obj
```

Using Curved Transformations.

The Curved flag tells poser that this link should use curve transformations. This is a method of bending designed for the tales of the animal figures in Poser. Here is an example used in the Horse figure:

```
2 tail1 zyx curve
    3 tail2 zyx curve
        4 tail3 zyx curve
            5 tail4 zyx curve
```

Inverse Kinematic Chains.

The last commands in the hierarchy file specify the links that compose the individual inverse kinematic chains. Inverse Kinematic chains are defined in the following format:

    ikChain chainName firstLink nextLink nextLink...
    endGoal

In the example above the ikChain is defines as follows:

Fig. 49—An ikChain line in a Hierarchy file.

    ikChain   LeftLeg lThigh lShin lAnkle lFoot

            Chain Name

The name of an ikChain cannot contain spaces.

CONVERTING HIERARCHY FILES.

Once the Hierarchy file is completed in the text editor, you can import it into Poser 3 by converting it into a geometry resource (called a CR2 file).

This geometry resource is then used by Poser 3, in conjunction with OBJ 3D data to create a new figure file with rotation order, and Inverse Kinematic relationships as defined by the hierarchy text file.

On Windows, the resource is a separate file ending is RSR. On a Macintosh, the resource is stored with the OBJ file. If you need to edit the resource on a Mac, use a resource editor to remove the text from the OBJ file, or create a new text file by copying and pasting from the old one.

If you make changes to the hierarchy file and then convert it again, the conversion won't re-create the geometry resource if it already exists in the OBJ file. So, if you are trying to make geometry changes, you need to either delete the resource, or start with a new blank text file that contains only the text portion of the OBJ file.

To convert a Hierarchy file:

1. Choose **File menu> Convert Hier File**. The Open dialog appears.

2. Locate the Hierarchy file you created in the text editor and click Open.

   If there are no errors, a Poser 3 Body Library file is created.

   The hierarchy conversion may take several minutes if there is a large geometry file.

   The figure file that gets created references the geometry file whenever used. Its location should be established and not moved later or the figure file cannot find the geometry.

If the location is changed you need to edit the figure file with a text editor to designate the new location (specified relative to the Poser 3 application in Mac format).

VERIFYING HIERARCHY FILES.

Once you begin adjusting the joints you are not able to regenerate the figure file a second time and have all your joint changes in place. Make sure that all Parent-Child relationships are correct before editing Joint Parameters. You can make geometry corrections later, but you cannot change the hierarchy without creating different joints from scratch again.

ADJUSTING JOINT PARAMETERS.

When the Hierarchy file was converted into a new figure file, Poser 3 automatically added joints between all the parent and child objects in the figure. These joints may not work as expected as they use the default joint settings.

Before you can pose your figure, you need to adjust each body part's joint parameters. The Joint Parameters palette lets you select each joint, twist, smooth scale, and center parameter and adjust them for optimal bending.

Fig. 50—Joint Parameters palette.
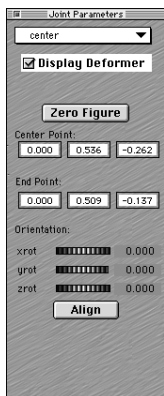
Refer to "Adjusting Joint Parameters." on page 30 for detailed instructions on adjusting Joint Parameters.

It's highly recommended that you work from the outside of the figure in, making a first pass through to make sure all origins are located as desired. If you move the origin point (center of rotations) of a body part later, it carries along the other joint changes so the bending characteristics change. You'll save yourself from doing extra work if you specify the origins (centers) first.

Remember, you can save your figure to a new Figure preset at any time. You should do this periodically as you work so you can back up if you make mistakes.

Keep the IK chains turned off until all adjustments are completed. You can use the Zero Figure button to quickly set all rotations to zero while working.

SETTING LIMITS.

Limits establish a range of rotation, position and scale for a given body part. Limits can be set for each body part on the figure. However the most commonly used, and the most logical, limits are Bend, Twist, Side-Side and Front-Back. For these parameters, limits are expressed as degrees. In this case, the limits define the maximum and minimum degrees of rotation.

Limits are set by using the Parameter Dial dialog.

Fig. 51—Parameter Dials dialog.
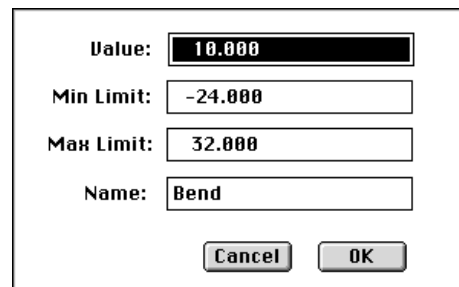
To set limits for a body part:

1. Double-click the Parameter Dial for which you want to set limits. The Parameter Dial dialog appears.

2. Enter maximum value of the parameter in the Max. Limit field.

3. Enter the minimum value of the parameter in the Min. Limit field and click OK.

Remember, you can save your figure as a new figure in the Figures library at any time. You should do this periodically as you work so you can back up if you make mistakes.

SETTING FAVORED IK ANGLES.

The Inverse Kinematics in Poser 3 works from the current rotations of a body part, therefore proper IK angles need to be preset in the figure for it to work predictably.

Therefore, the original rotation values loaded on the joint are important to help the IK system know which way to bend some joints.

Fig. 52—Favored IK positions.
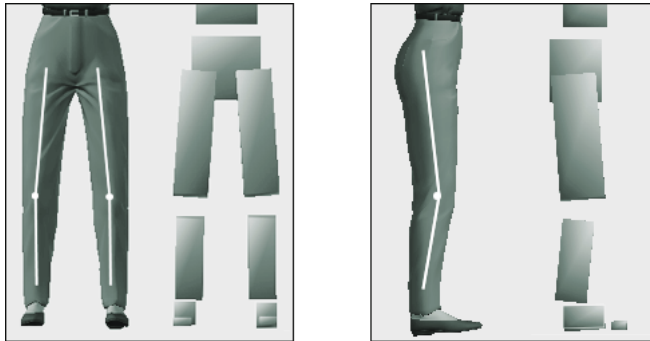
Before you memorize the default position of all the body parts, you should bend the ones that are used in IK chains so that they favor their natural bending directions. For example, a human thigh is bent slightly forward and out. The shin is bent slightly back and in.

Do this while keeping all the IK chains turned off. Only turn them on after you have set the favored angles.

MEMORIZING DEFAULT POSITIONS.

When you memorize the settings on the figure you're setting the default values and positions for all the figure's joints and body parts. The next time you use this figure, the memorized setting are used.

To memorize the figure's settings:

⌘ Choose **Edit menu> Memorize> Figure**.

SETTING SURFACE MATERIALS.

In order to set the preset material for your figure, you'll need to edit it's CR2 file that you created when you converted the Hierarchy file.

The preset material cannot be set from the Poser 3 interface. You'll need to edit the final Figure library file with a text editor that is capable of opening any kind of file. At the end of the figure file is a block of text that specifies the preset material colors and texture map. If you've edited the regular material to be what you'd like, you can copy the information to the preset material.

The following is a sample of the surface material section of the CR2 file:

```
material shirt

        KdColor 0.972549 0.988205 0.972549 1
        KaColor 0 0 0 1
        KsColor 0.00784314 0.00784314 0.00784314 1
        TextureColor 1 1 1 1
        NsExponent 30
        bumpStrength 0
        ksIgnoreTexture 0
        textureMap "Biz Man Texture.pict"
                0 0
```

ADDING MORPH TARGETS.

If you have created wavefront format OBJ files that have the identical vertex ordering as any individual body part, you can load them as morph targets.

Refer to "Setting Up Morph Targets." on page 3 for more on setting Morph Targets.

SETTING BODY PART NAMES.

The names of the groups you set up in the OBJ file and Hierarchy file may not be the most descriptive names you can use. Once the main parameters are set for the figure, you can change the name of each body part.

To change the name of a body part:

1. Double-click a body part. The Element Properties dialog appears.

2. Enter a new name in the Name field.

SAVING NEW FIGURES TO THE LIBRARY.

After you're finished setting joint parameters, and body part names you can save the final figure to the Figures category in the Libraries palette where it can be recalled at any time.

Refer to "Saving to the Libraries Palette" in the Poser 3 Users Guide.

TUTORIAL - POSER 3 FIGURE CREATION.

In this tutorial, a Ray Dream Studio object is converted into a Poser 3 figure. A pre-made mesh object included on your Ray Dream Studio 5 CD is used, but the concepts can be applied to any of your own models.

Important Note: Before starting this tutorial, make sure you have installed the new versions of the OBJ import/export plug-in and Mesh Modeler included with Poser 3. See "Installing Plug-ins." on page 51 for more information.

Creating the Initial Figure.

To create the initial figure:

1. Place your Ray Dream Studio 5 CD in the drive and Launch Ray Dream Studio 5.

2. Create a new, empty scene.

3. Choose **Windows menu> Browser** to open the Browser, then select the Objects tab.

4. Choose **File menu> Add Directory/Folder**.

5. On your CD-ROM drive, select the **Dream Models: Mesh Models** folder.

   The folder is added at the end on the right, so you may need to scroll the window using the scroll bars at the bottom of the window.

6. Drag and drop the woman2 object into the Time Line Hierarchy. The Woman2 object is located towards the bottom of the list.

   The Woman2 object is a group of objects. You need to move all the groups into the mesh modeler, but retain individual body parts. Use the OBJ exporter to accomplish this.

7. Choose **File menu> Save As**.

8. Set the file format to Wavefront OBJ and click Options.

9. Turn on the Export Full Path for Grouping option and then Click OK.

10. Select a folder, then click Save.

11. Close the Ray Dream Studio version of the scene.
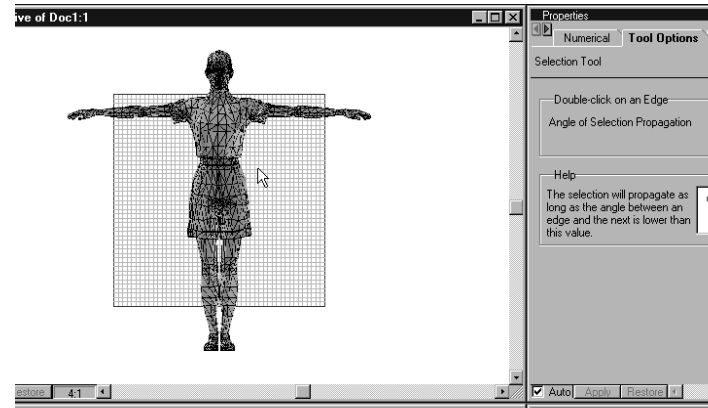
Naming Body Parts.

To name the upper body parts:

1. Reopen the OBJ file, using the default settings for Import options.

2. Double-click the object to jump into the mesh form modeler.

   If the set name dialog appears, leave the default name and click OK.

3. Select **View menu> Preset Position> Front**.

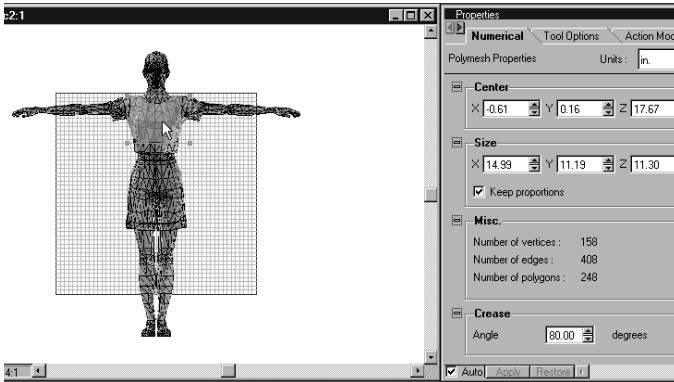*Fig. 53—Viewing the front of the Poser 3 figure.*

4. Using the Zoom tool, zoom in on the figure to about a 4:1 magnification.

   All of the individual objects from the original Ray Dream Studio groups are now separate polymeshes inside the mesh modeler.
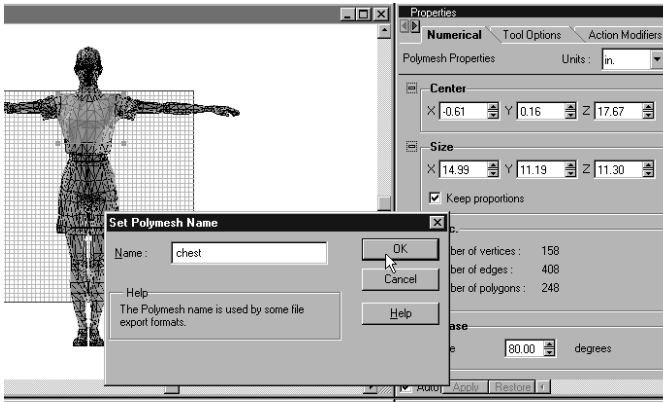
5. Double-click on the chest with the selection tool.

Fig. 54—Selecting the chest.

6. With the chest selected, choose **Polymesh menu> Name Polymesh**.

Fig. 55—Naming it "chest".

7. Change the name to "chest", then click OK.

8. Repeat the above for the neck portion of the figure, naming it "neck".

9. Call the left and right shoulder "lShldr" and "rShldr".

   To match Poser 3 conventions, left and right should be from the reference of the figure, opposite to your own left and right. Also, make sure that the selection tool has selected the entire polymesh before trying to use name polymesh. If double-clicking doesn't select the entire polymesh, double-click in an unselected area of the object. If the name polymesh feature is grayed out, then the entire polymesh is not selected.

10. Using the same procedure, name:
    - the left and right upperarms: "lUpperarm" and "rUpperarm"
    - the left and right forearm: "lForearm" and "rForearm"
   - the left and right hand "lHand" and "rHand"

To name parts of the head:

1. Double-click the forehead of the figure to select the head.

2. Use Name polymesh to name the object "head".

3. Select **View menu> Hide Selection**.

   You may need to zoom in to see the eyes and mouth now left behind.

4. The eyes and mouth are currently a single object. Use the marquee tool to select the figure's left eye.

Fig. 56—Selecting the left eye.
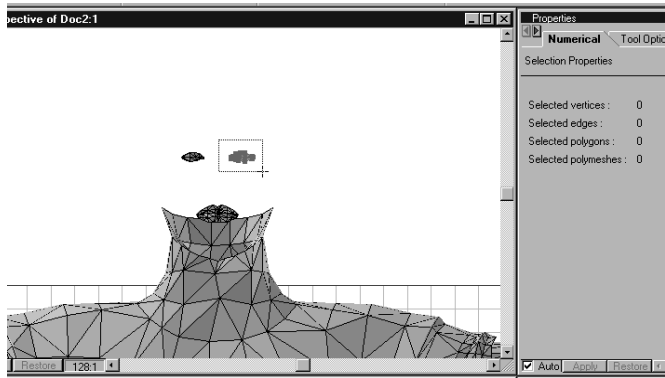
5. Choose **Selection menu> Detach Polygons** to make the eye a separate polymesh.

6. Choose **Selection menu> Weld** to link the eye to the eyelashes.

7. Choose Name Polymesh to name the object "lEye".

8. Make the figure's right eye a separate polymesh, link the eye to the eyelashes, and name it "rEye".

9. Double-click on the mouth.

10. Use Name Polymesh to name the object mouth.

To name the midsection body parts:

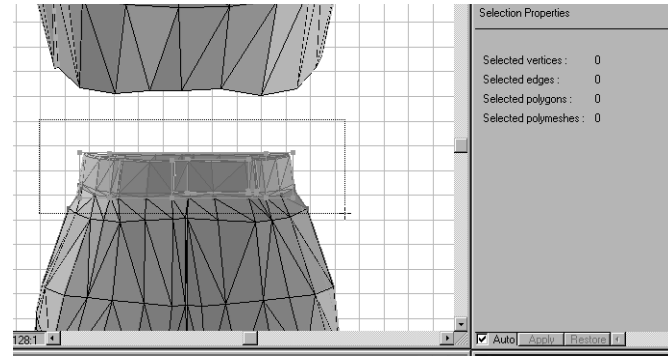1. Zoom out, and then zoom in around the midsection of the figure.

2. Double-click just above the belt and name this section "abdomen".

Fig. 57—Selecting the abdomen area and name it "abdomen".
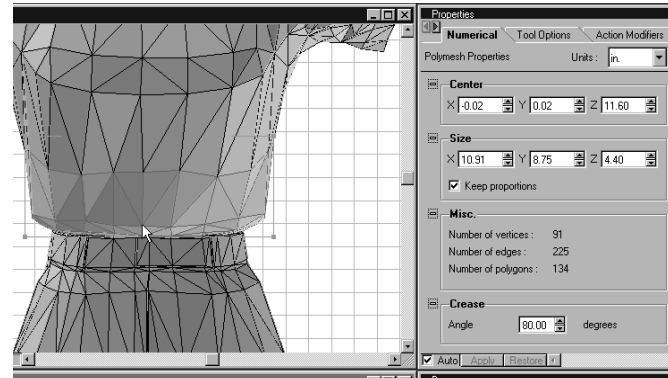
3. Select **View menu> Hide Selection**.

4. Use the marquee selection tool to drag a selection around the belt and into the hip.

Fig. 58—Selecting around the belt and into the hip.

5. Hold down the shift key and double-click with the selection tool on an unselected area of the hip.

6. Choose **Selection menu> Weld** to create a single hip object.

7. Make sure you have a polymesh selected, and then name it "hip".

8. Zoom out, then zoom back in on the legs.

9. Double-click on the shorts below the hip.

   You can see that both the left and right side of the shorts are a single object.

10. Use the marquee selection tool while holding down the Alt-Option/Alt key to deselect the figure's left side of the shorts.

    You'll probably want to start from the outside and slowly deselect inwards until you reach the space between the two legs.

Fig. 59—Deselecting the left side of the shorts.
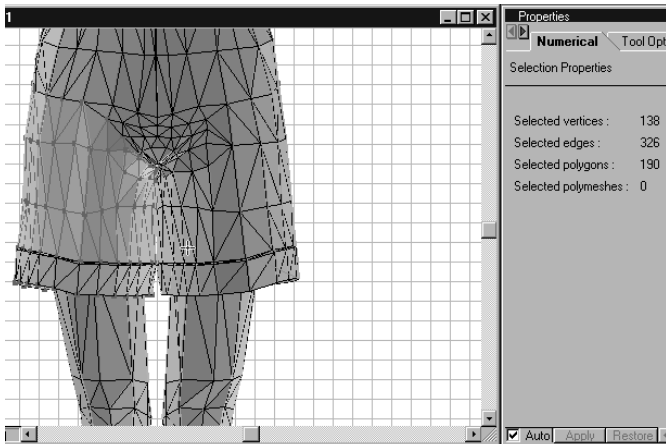
11. Use **Selection menu> Detach Polygons**.

12. The bottom hem of the shorts is also a separate object. Select the hem, then deselect the figure's left side with the alt-marquee selection.

Fig. 60—Selecting the hem, then deselecting the left side.
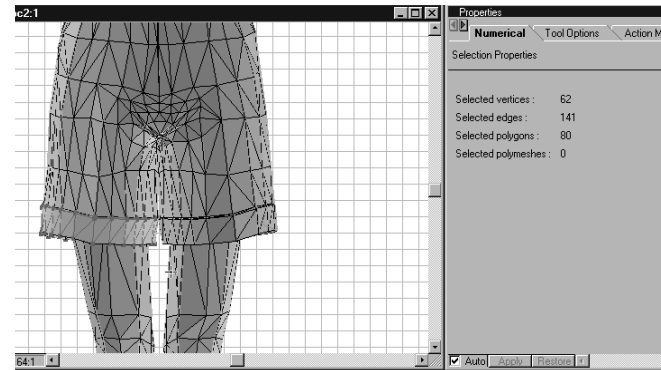
13. Use Selection Menu: Detach Polygons.

14. Select just the figure's right hem.

15. Use **View menu> Hide Selection**.

16. Select the polygons that are behind the hem, which connect the shorts to the right thigh.

17. Use **View menu> Reveal Hidden Vertices**.

18. Use the selection tool with the shift key to also select the right hem and right leg of the shorts.

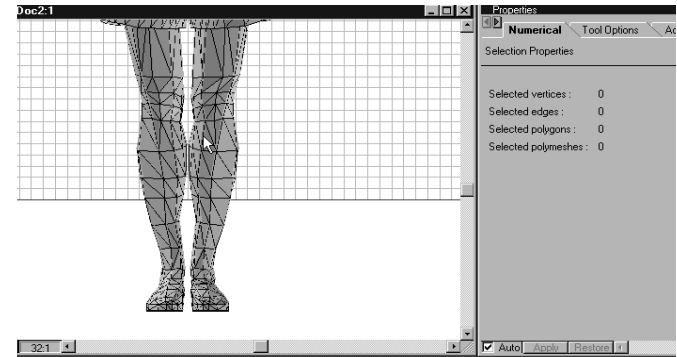*Fig. 61—Selecting the right hem and leg of the shorts.*
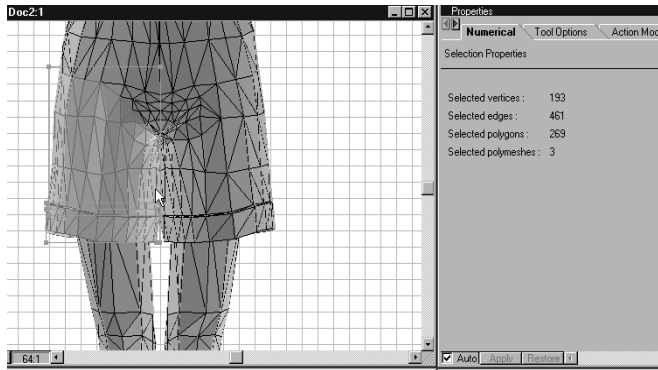
19. Use **Selection menu> Weld**.

20. Repeat the previous two steps for the left pant objects.

21. Name each side "lPant" and "rPant" respectively.

To name body parts from the thighs downward:

1. Zoom out, and then zoom in from the thighs down.

Fig. 62—Zooming out, then back in from the thighs downward.

2. Select the left and right thigh and name them "lThigh" and "rThigh" respectively.

3. Select the left and right calf and name them "lCalf" and "rCalf" respectively.

4. The feet are actually broken up into areas of 'foot' and areas of 'sandal'. For this tutorial, combine the areas into a single left and right foot. Double-click the figure's right ankle.

*Fig. 63—Double-click the figure's right ankle.*
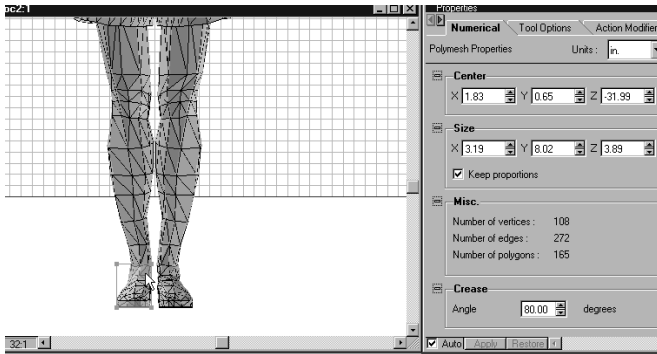
5. Use the marquee tool with the Shift key to select the rest of the right foot.

6. Use **Selection menu> Detach Polygons**.

7. Use **Selection menu> Weld**.

8. Name the object "rFoot".

9. Repeat for the left foot, naming the resulting object "lFoot".

To name parts in the shoulder area:

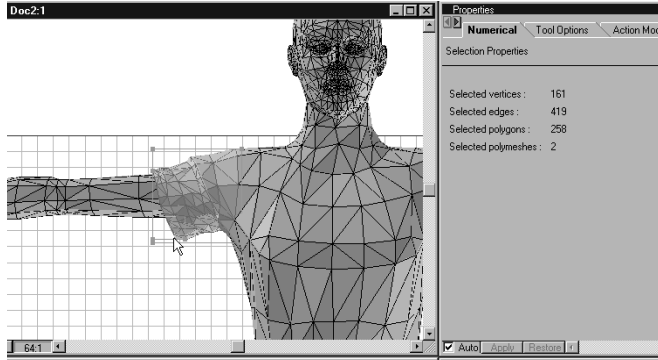1. Zoom out, and then zoom back in around the right shoulder.

Fig. 64—Zooming in on the right shoulder.
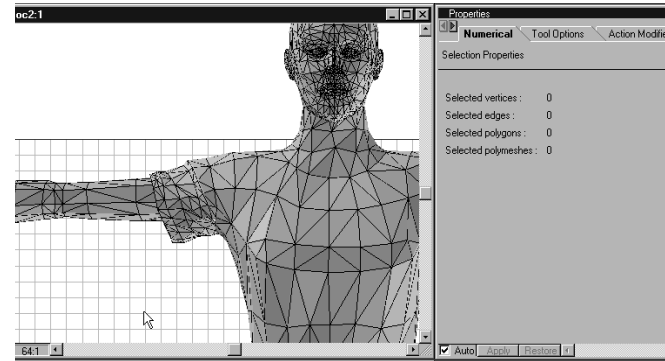
2. 67. Select the right shoulder.

3. Hold down the shift key and double-click on the very edge of the hem of the shirt with the selection tool. This selects the polygons moving inward towards the upper arm.

Fig. 65—Selecting the polygons inward towards the upper arm.

4. Use Selection Menu: Weld.

5. Rename the resulting object rShldr.

6. Repeat for the left shoulder.

7. Select **View menu> Reveal hidden vertices** if any are still hidden.

8. Click Done.

9. Save a copy in Ray Dream Studio format.

Checking geometry imports.

There are still a couple of steps to complete the object in Ray Dream Studio. Importing this object as a prop into Poser 3 allows you to check the import of the geometry for errors.

This part of the tutorial illustrates potential problems you may have in your models, and how you might fix them.

To use Poser 3 to check for geometry errors:

1. Select Save As and set the file type to Wavefront.

2. Locate your Poser 3 folder on your hard drive, then open the **Runtime: Geometries** folder.

*Fig. 66—Opening the **Runtime: Geometries** folder.*
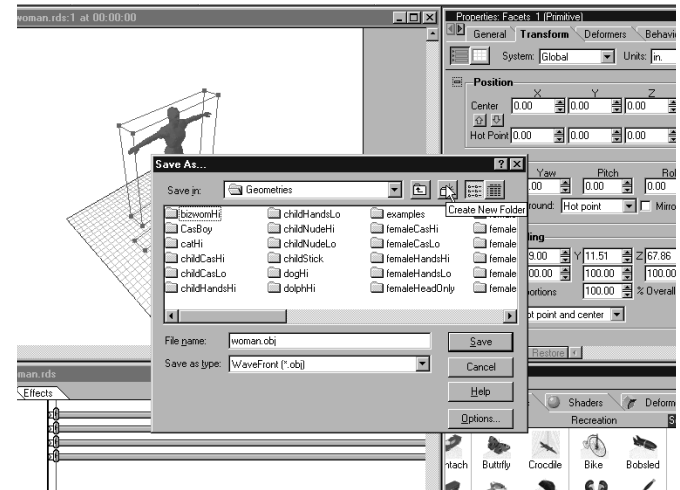

3. Make a new folder called **rdswoman**.

4. Open the **rdswoman** folder and save the file as woman.obj.

5. Open Poser 3.

   You may need to close Ray Dream Studio first in order to have enough memory.

6. Click and drag on the translate in/out tool to move the figure away from the camera.

7. Select **File menu> Import: Wavefront OBJ**.

8. Open the woman.obj file. Use the default import options.

9. Use the translate tool to drag the figure up.

Fig. 67—Draging the figure up.
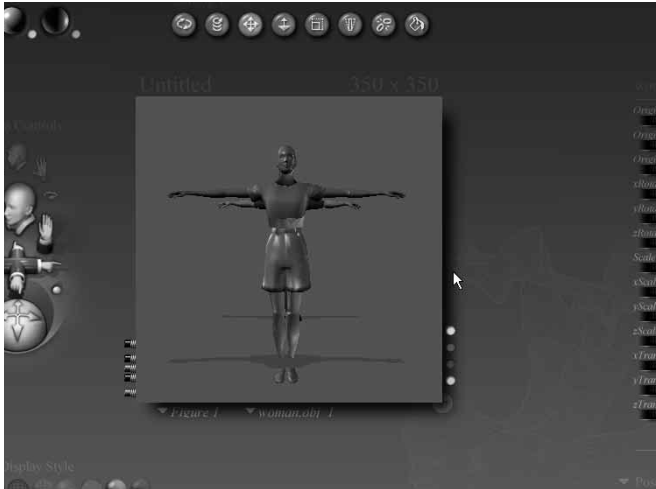
Fixing surface normals.

If you notice that some areas seem to have holes or appear inverted. This is because the surface normals are flipped. You should see holes in the eyes, neck, abdomen, thighs, and calves. You can fix this in Ray Dream Studio.

To fix the surface normals:

1. Close Poser 3, then restart Ray Dream Studio (if necessary).

2. Reopen the woman.obj file.

3. Double-click the object to enter the modeler.

4. Use the selection tool with the shift key to select the eyes, neck, abdomen, thighs, and calves.

   You'll probably need to select and hide the head to get to the eyes.

Fig. 68—Selecting eyes, neck, abdomen, thighs, and calves.
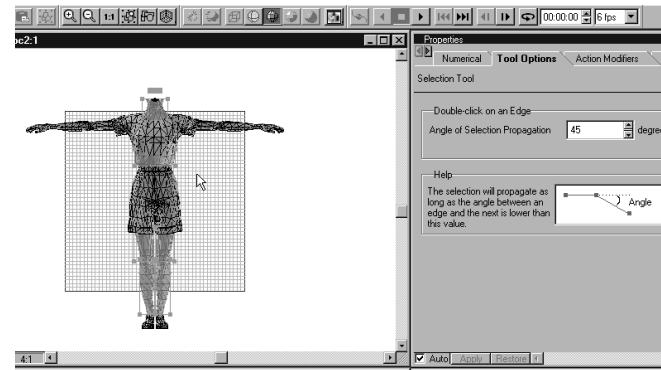
5. Select **Polymesh menu> Reverse Polymesh Normals**.

6. Select **View menu> Reveal Hidden Vertices**.

7. Click Done.

8. Select **File menu> Save As**.

9. Set the file type to Wavefront.

10. Click Options.

11. Turn on the Export Texture Maps option.

Although there are no maps assigned in Ray Dream Studio, the Export Texture Maps option allows you to set a material color for each body part in Poser 3. With this option turned off, the entire figure is considered one surface.

12. Save the file as womanfinal.obj into the **rdswoman** folder.

13. Close Ray Dream Studio. You do not need it for the remainder of this tutorial.

Creating the Hierarchy File.

You must create a hierarchy file in order to import the figure back into Poser 3. See "Creating hierarchy files." on page 26. for details on the syntax of the hierarchy file.

To create the hierarchy file:

1. Create your hierarchy file to appear as follows:

objFile :Runtime:Geometries:RDSWoman:womanfinal.obj

```
 1 hip zxy
        2 abdomen yxz
              3 chest zyx
                    4 neck yxz
                          5 head yxz
                                6 lEye yxz
                                    6 rEye yxz
                                          6 mouth yxz
                    4 lShldr xzy
                          5 lUpperarm xyz
                                6 lForearm xyz
                                      7 lHand xyz
                    4 rShldr xzy
```

```
                          5 rUpperarm xyz
                                6 rForearm xyz
                                      7 rHand xyz
        2 lPant yxz
              3 lThigh yxz
                    4 lCalf yxz
                          5 lFoot zxy
        2 rPant yxz
              3 rThigh yxz
                    4 rCalf yxz
                          5 rFoot yzx
```

ikChain lArm lShldr lUpperarm lForearm lHand

ikChain rArm rShldr rUpperarm rForearm rHand

ikChain lLeg lPant lThigh lCalf lFoot

ikChain rLeg rPant rThigh rCalf rFoot

2. Save the hierarchy file into the **rdswoman** folder and name it womanfinal.phi.

To scale the new figure:

1. Open Poser 3

2. Select **File menu> Convert Hierarchy File**.

   A new figure is created in a group called New Figures.

3. Open the library window and click on the figure tab.

4. Select the New Figures category.

5. Double-click the new figure (with the shrugging Poser 3 figure icon).

6. The figure is initially very large. Use the Current Elements pop-up menu to select the 'body'.

7. Double-click the scale parameter dial and change the value to 4.2%.

To adjust body part color:

1. Select **Figure menu> Drop to Floor**.

Fig. 69—Body parts are different colors.
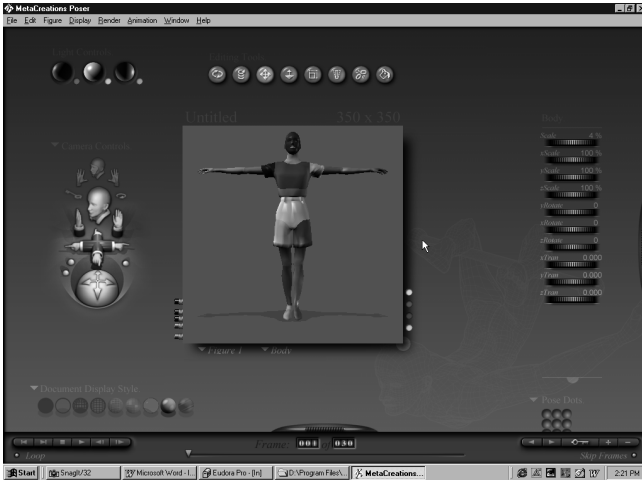
2. Each body part is a different color. Use the color tool on the body parts to better organize the figure.

3. Use a similar color for the chest, abdomen, left shoulder and right shoulder to form the shirt.

4. Use a similar color for the hip, left pant, and right pant to form the shorts.

5. Use a similar color for each foot.

6. Color the mouth red and each eye white.

7. Use a skin tone for the remaining body parts.

Fig. 70—After adjusting body part colors.
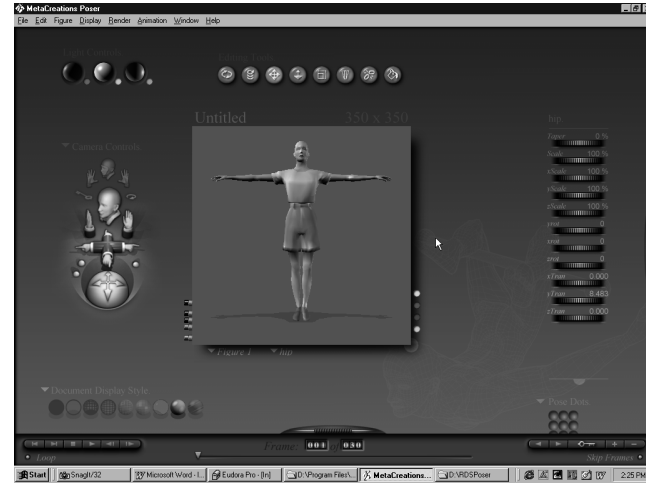
8. Select **Edit menu> Memorize: Figure**.

9. Add the figure to the library, naming it Womanfinal.

Setting joint parameters.

You now need to set the joint parameters for each body part. This tutorial gives you a general overview of how to begin setting your joint parameters. For more information, see "Adjusting Joint Parameters." on page 30.

Before adjusting joint parameters, always check that IK Chains for the figure are turned off.

Your first task is to set the center of rotation for all body parts. If you change this later, it effects all other bending parameters for parent and child body parts.

To set the hip center of rotation:

1. Switch to outline display mode.

2. Open the Joint Parameters window.

3. Click on Zero Figure.

4. Start by selecting the hip.

Fig. 71—Adjusting hip rotation.
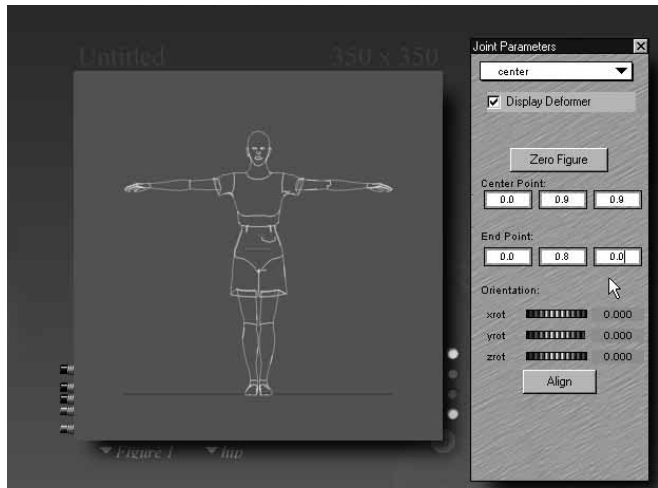
5. Change the Center point x and z values to 0.0.

6. Set the y value to 0.9.

7. Set the End Point y value to 0.8. The x and z value should be 0.0.

To set the centers of rotation for pant body parts:

1. Select the right pant body part.Look at the center of rotation.

2. Select the right thigh body part.

3. Drag the center of rotation up towards the edge between the right pant and the hip. This gives the effect of the thigh and the pant leg moving together.

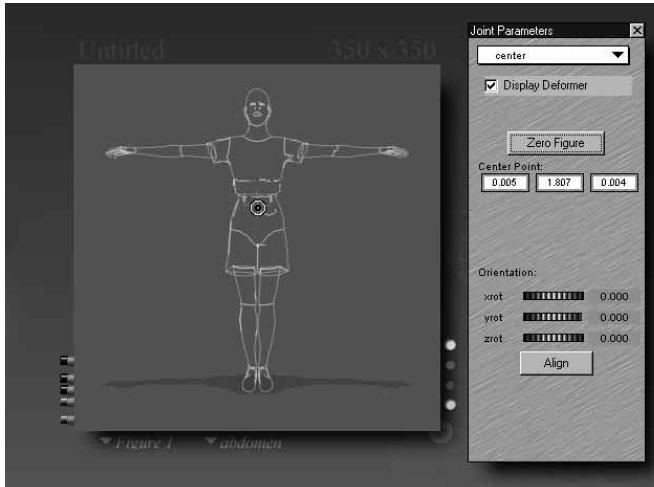*Fig. 72—Adjusting the right thigh body part.*
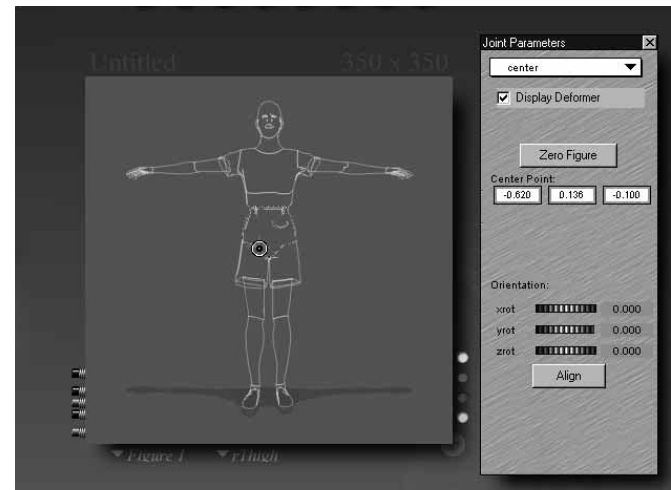
4. Repeat this for the left thigh.

To set the center of rotation for the abdomen:

1. Select the abdomen.

2. Drag the center of rotation down, slightly into the hip.

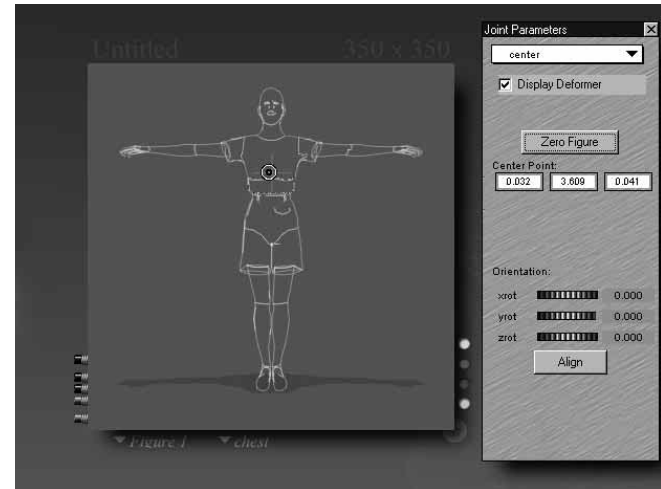*Fig. 73—Adjusting the abdomen.*

To set the center of rotation for the chest:

1. Select the chest.

2. Drag the center of rotation up slightly, within the bottom of the chest.
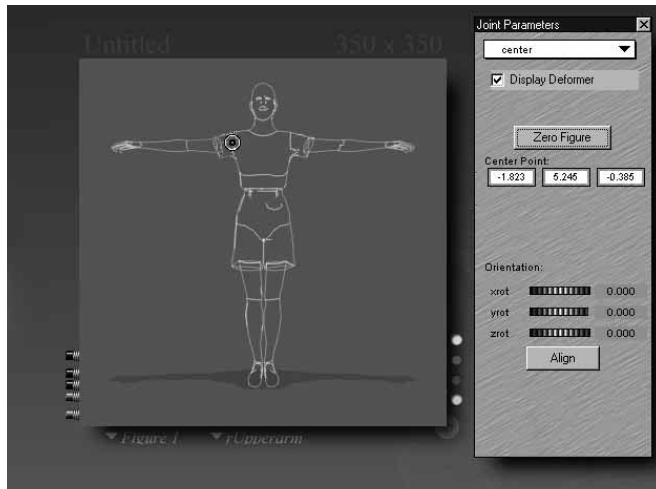
Fig. 74—Adjusting the chest.

To set the center of rotation for the arms:

1. Select the right upper arm.

2. Move the center of rotation towards the joint of the shoulder.

Fig. 75—Adjusting the upper arm.


3. Repeat this for the left upper arm.

To set the center of rotation for the head:

1. Select the head.

2. Switch to the face camera.

To set rotation values:

1. In the Joint Parameters Window, switch from center to yrot.

2. Swap the twist start and twist end positions. You can test your settings by adjusting the yrot Parameter Dial in the Parameter Dial Window. The twist end (in green) should be above the chin. The twist start (in red) should be below the chin and into the neck. This blends the rotation of the head into the neck.
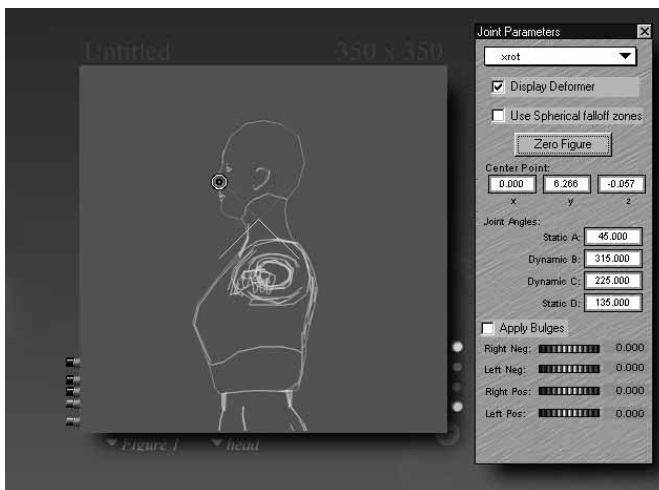
Fig. 76—Blending the head into the neck.
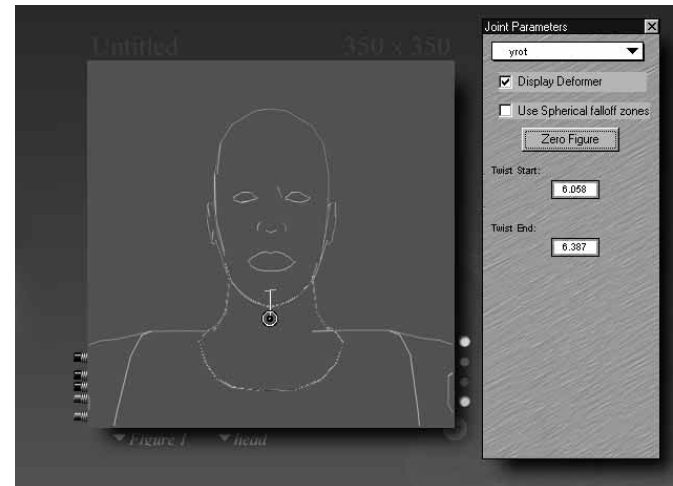
3. Switch to the camera from the right, and zoom in on the head and neck.

4. Switch from yrot to xrot in the Joint Parameters Window.

Fig. 77—Adjusting the head and neck.

5. Drag the static handle on the left (in red) down below the chin.

6. Drag the dynamic handle on the right (in green) counter-clockwise till it is also below the chin, but still higher than the static handle you dragged in the previous step.

   Notice that as the dynamic handle hits the static handle, the static handle is also moved.

7. Drag the static handle counter-clockwise until it is at the top of the back of the neck.

Fig. 78—The static handle at the top of the back of the neck.
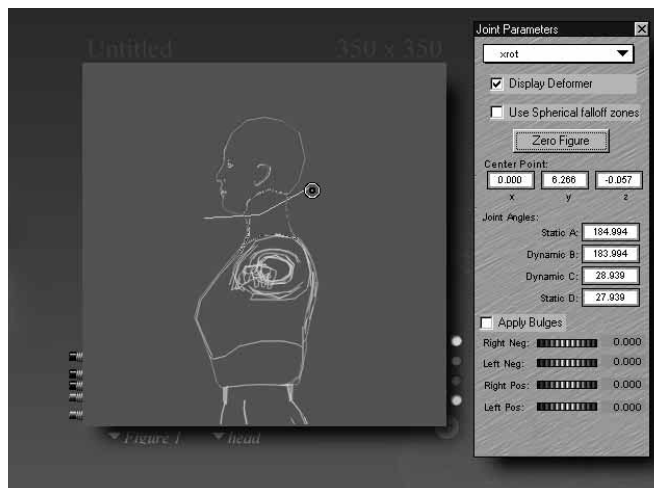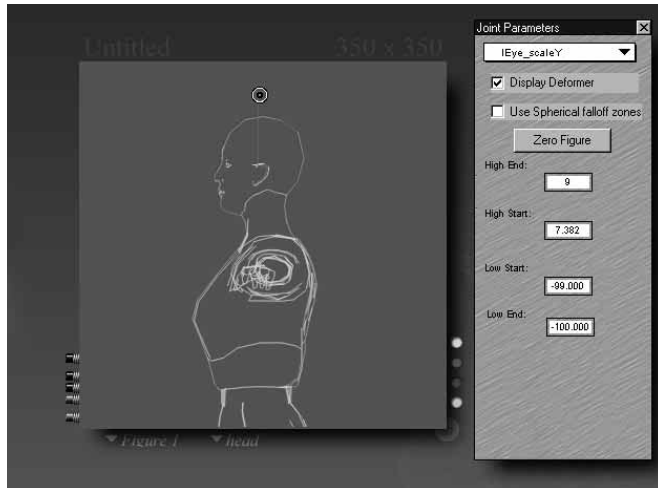

8. Test your settings by adjusting the xrot parameter dial.

To adjust scale values:

1. Switch from xrot to neck_scaleY. This controls the blending zone for the y-axis scaling of the neck when scaling the head.

2. Set Low start to 5.97 and Low end to 6.14.

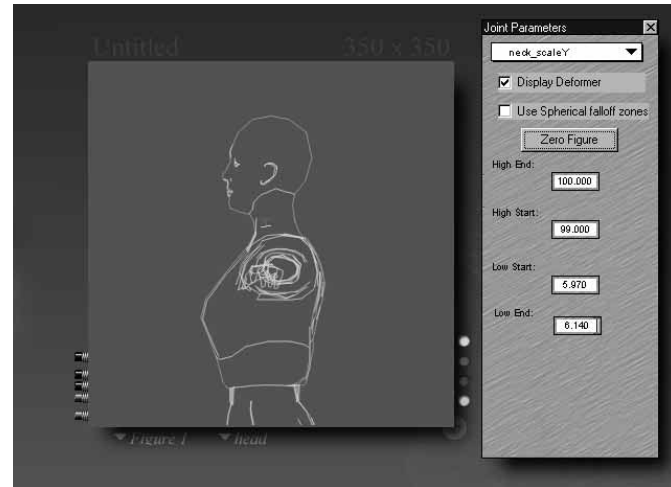   This sets the blending to within the neck, below the chin.

Fig. 79—Blending to within the neck, below the chin.

3. Select the mouth_scaleY.

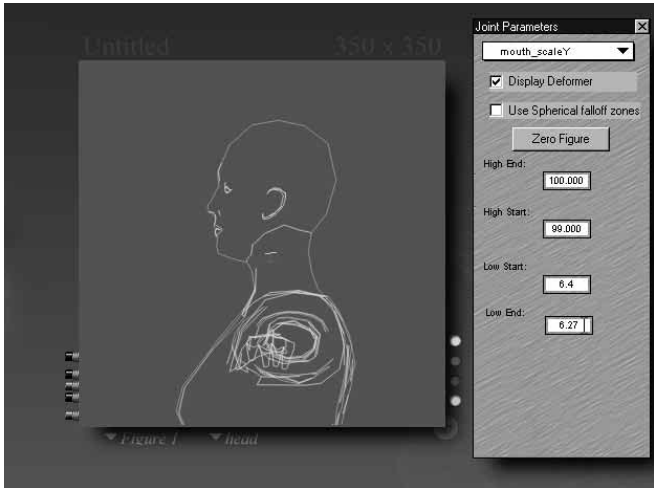4. Set Low start to 6.4 and Low end to 6.27.

Fig. 80—Setting the eye.

5. Select lEye_scaleY.

6. Drag the High end up towards 9.

Fig. 81—Dragging the High end up towards 9.

7. Repeat this for the right eye.

8. You can now scale the head to see the effects.

   You can now set limits for each body part.

To set remaining limits.

1. Repeat the above procedures for the remaining body parts, such that your figure moves and bends realistically.

   See "Adjusting Joint Parameters." on page 30 and "Creating Figure Models." on page 23 for more information.

2. Set the default IK angles. Memorize the default position.

3. Finally, save the figure to the library.

USING POSER 3 WITH OTHER APPLICATIONS.

USING POSER 3 WITH RAY DREAM STUDIO 5.

Your Poser 3 application comes with plug-ins that let you use Poser 3 features in Ray Dream Studio. The plug-ins let you combine the features of the two programs, converting Ray Dream Studio into a powerful 3D Character Animation tool. Ray Dream Studio's modeling, scene design, ray-tracing, and general-purpose animation tools can now be integrated seamlessly with Poser 3's high-resolution human and animal figures, posing tools, and figure animation.

Ray Dream Studio plug-in components include:

• Poser 3 Importer: lets you open Poser 2 and Poser 3 scenes in Ray Dream Studio.

• Poser 3 modeler: lets you edit Poser 3 models in Ray Dream Studio.

• A new version of Ray Dream Studio's Mesh Modeler with features for use with Poser 3 models.

• An OBJ Import/Export plug-in to let you export models from Ray Dream Studio for use in Poser 3

Updates to the Poser 3 plug-ins for Ray Dream Studio are available on the MetaCreations website. These include bug fixes for the those included on the Poser 3.0 CD. For information on downloading the updates, point your browser to "http://www.metacreations.com/products/poser3/resources2.html".

INSTALLING PLUG-INS.

Poser 3 plug-ins for Ray Dream Studio are installed during the installation of Poser 3.

To install the Ray Dream Studio plug-ins:

1. Select the custom install option.

2. For Macintosh only, select the Ray Dream Studio Extensions option.

The installer detects your Ray Dream Studio folder and prompts you to verify the location. The plug-in is then installed into the Ray Dream Studio Extensions folder on Macintosh, or the Ext folder on Windows. In either case this folder is found within your Ray Dream Studio folder.

The first time you launch Ray Dream Studio, the Poser 3 plug-ins ask you to locate your Poser 3 application on your hard disk. This is because the Poser 3 plug-ins rely on the geometry and texture files located in the Poser 3 application. You need to have Poser 3 installed on your computer to be able to use the Ray Dream Studio Poser 3 plug-ins.

USING THE POSER 3 IMPORTER.

The Poser 3 Importer allows you to open Poser 3 scene files in Ray Dream Studio. Ray Dream Studio treats Poser 3 scene files as a single object. Each keyframe from the Poser 3 scene is duplicated in Ray Dream Studio.

Fig. 82—A Poser 3 scene in the Ray Dream Studio Perspective window.
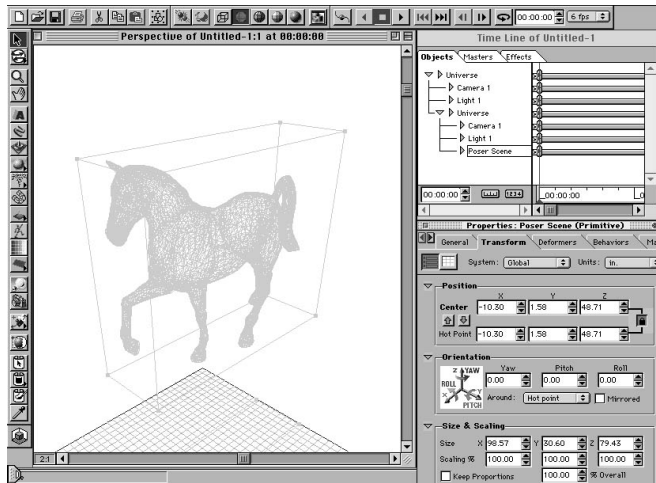
Imported Poser 3 scenes include figure geometry, animation, and texture information. The Importer automatically generates a texture for each figure and prop to match its appearance in Poser 3. Poser 3 renders surfaces as a multiplication of the surface color and its texture. The texture created for the figures in Ray Dream Studio is based on this multiplication, so that it renders the same as in Poser 3. It is therefore not the same as loading the texture found in the **Poser 3: Runtime: Textures** folder, which are designed specifically for Poser 3.

To import a Poser 3 scene:

1. Choose **File menu> Import**. The Import dialog appears.

2. Click the Format popup and choose Poser 3.

3. Locate the Poser 3 file and click Open.

Importing Poser 3 Animations.

When an animation is imported, a keyframe is set in Studio for each frame in the Poser 3 file. The frame rate is the same as the one set within Poser 3 (30 fps is the default in Poser 3). The Importer matches the interpolation type, constant or spline, as set in Poser 3. All keyframes are on the masters tab.

Creating Motion Paths.

Because all keyframes are on the masters tab, you can't group or link objects to the Poser 3 scene. You also can't use behaviors such as Track or Point-At with a Poser 3 figure, because these are dependent upon keyframe data on the objects tab.

To accomplish Track or Point-At type effects:

1. Add cloaked objects as targets.

2. Use the cloaked objects to create motion paths similar to the figures

3. Point-At or Track the cloaked objects.

You can also animate your figure in Poser 3 using the Animate in Place option of the Walk Designer, and then add linear motion in Ray Dream Studio.

Detecting Collisions.

Similarly, using Apply Physics for collision detection and similar effects can be done, but is very slow, and can be difficult to control.

To simulate Poser 3 figure and object interaction:

⌘ Either import the Ray Dream Studio Objects into Poser 3 for animation there or use props within Poser 3 to approximate your Ray Dream Studio objects. You can then delete the props before exporting back into Ray Dream Studio.

TEXTURING NEW FIGURES.

Scenes imported from Poser have a texture map generated for them, but new figures created within Ray Dream Studio do not.

A group of shaders for each figure, based on the default surface colors from Poser, can be found on the Poser 3 CD-ROM, in a folder called **Poser Browser** files. If you add this directory to the shaders tab of the browser, you can drag and drop these shaders onto your figure. These default shaders give a plastic appearance, so you may want to set your own values for highlight and shine. See the Shading Objects chapter, in your Ray Dream Studio manual for more information on the Shader Editor.

You can use MetaCreations Painter 3D to perform additional texturing on your Poser 3 figures. You can save a texture generated by the Poser 3 Importer as a bitmap file, modify it in your favorite image editing software, and reload it in Ray Dream Studio. See your Ray Dream Studio manual for more information about texture mapping.

You also can find sample object browser files on your Poser 3 CD-ROM. Add the **Poser Browser Files** folder from the Poser 3 CD-ROM to the objects tab of the browser to access these files.

USING THE POSER 3 MODELER.

The Poser 3 modeler allows you to create new figures or edit existing Poser 3 scenes, imported into Ray Dream Studio. It is not intended to replace the Poser 3 application, but it can save you time, because you do not have to go back and forth between Poser 3 and Ray Dream Studio for minor

modifications. We recommend that you create complex animations/poses in Poser 3, and only refine the poses to match the rest of your 3D scene using the modeler plug-in.

Fig. 83—A figure in the Poser 3 modeler.
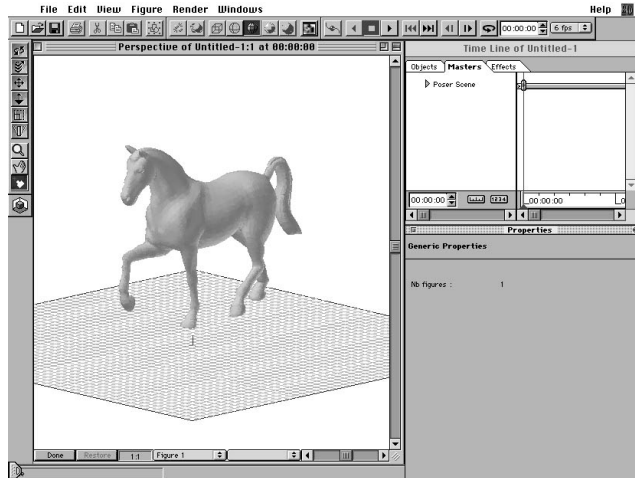
Adding a new Figure.

The Poser 3 Modeler provides many of the same tools found within Poser 3. You can change the figure type and add figures, select individual body parts to manipulate the figure's pose, animate the figure's movements, and use the figure's morph targets.

The Properties palette contains all the controls that would be found in the parameter dials window in Poser 3. The Tools toolbar now contains Poser 3 editing tools, with the exception of the color and chain break tools.

There are only two preview modes available within the Poser 3 modeler: wireframe and preview quality.

To add or edit a Poser 3 figure:

⌘ Drag and drop the Poser 3 icon from the Tools toolbar into the Perspective or Time Line hierarchy window.

Fig. 84—The Poser 3 icon.

This places the default Poser 3 figure into your scene and opens the Poser 3 modeler.

⌘ Double-click a Poser 3 figure in the Perspective window.

⌘ Or, select a figure and choose **Edit menu> Jump In**.

Viewing Figure Properties.

As with the Poser 3 Parameter Dials palette, the Properties Palette in Ray Dream Studio is context sensitive. It provides the same controls for the selected body part, or entire figure, as you would find in Poser 3.

Fig. 85—The Properties Palette.
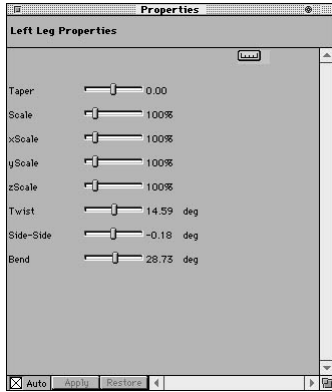
These controls include parameters for morph targets, like facial controls or morph targets you've added to custom figures.

View or alter attributes control.

There is an additional control within the Properties palette used for viewing and altering an attributes minimum and maximum value. Click this control to toggle the display and editing of these values to either on or off.

Viewing your Poser 3 Figure.

The View menu contains several standard Ray Dream Studio viewing controls.

Fig. 86—The View menu

The following controls are added to the View menu for use with Poser 3:

Current Figure: Switch between multiple figures in the modeler. This menu is also available as a pop-up menu at the bottom of the main window.

Current Body Part: Select from the list a body part within the currently selected figure. This menu is also available as a pop-up menu at the bottom of the main window.

Left/Right Hand Fingers: If any part of an articulated hand is selected, you can use this list to select a specific part of the hand. Remember that only hand models and figures in the People folder have articulated hands.

Editing Your Poser 3 Figure.

The Figure menu controls several aspects of a Poser 3 figure and scene.

Fig. 87—The Figure menu
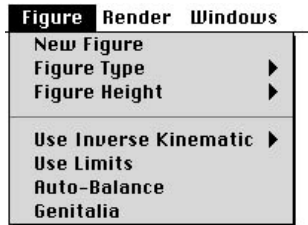
The following controls are added to the Figure menu for use when editing Poser 3 figures:

New Figure: Add a figure to the current scene within the modeler.

Figure Type: Change the currently selected figure. Figures are arranged by folder. Tutorial objects and user-created folders are found using the Other menu option.

Figure Height: Select a preset height scale for Poser 2 objects only. Using these settings on figures other than Poser 2 figures can cause unpredictable results.

Use Inverse Kinematic: Turn on or off figure IK chains.

Use Limits: Constrain to defined limits the movement of body parts. These limits can be viewed or altered using the Properties Palette.

Auto Balance: Use Auto Balance features for the currently selected figure.

Genitalia: Toggle Genitalia on or off for a Poser 2 or Poser 3 male nude figure.

Using Poser 3 Tools in the Toolbar.

Poser 3 editing features mirror functions found in the Poser 3 Editing Tools palette.

Fig. 88—The Editing Tools toolbar

Unlike Poser 3, these features can only be used on the current selection. You can't click and drag on editing features to affect the entire figure as you can in Poser 3.

To affect the entire figure:

⌘ Select the entire figure by changing the selected body part to 'body', or double-click anywhere in the figure.

All changes made by the following tools automatically update appropriate values in the properties palette.

Rotate Tool .

Rotate the currently selected body part around its center of rotation. The center of rotation for body parts can't be altered within Ray Dream Studio, but can be changed within Poser 3 in the Joint Parameters window.

Twist Tool .

Twist the currently selected body part around its twist axis. This axis runs lengthwise down the center of the body part. For example, the twist axis is the x-axis for arms and the z-axis (Poser 3 y-axis) for the torso.

Translate Tool .

Moves the currently selected body part. This tool works as it does in Poser 3, not like in Ray Dream Studio: the translation occurs along the screen plane. The working box is not used.

Scale Tool.

Scale the currently selected body part. For more predictable results, move the mouse either directly parallel or perpendicular to grid lines.

Taper Tool.

Taper the selected object. The object is tapered such that the side opposite the parent scales larger or smaller.

Displaying and Selecting Figures or Figure Parts.

Two pop-down menus are added to the perspective window to the right of the Done and Restore buttons. The menu on the left displays and selects the currently selected figure.

Fig. 89—Display/Select current figure menu.

The menu on the right displays and selects the currently selected body part within the figure.

*Fig. 90—Display/Select current body part menu.*

SCULPTING OBJECT SURFACES.

Poser 3 adds features to Ray Dream Studio's Mesh Form Modeler. The Mesh Form Modeler lets you edit an object's surface directly, by editing the points that define its surface. For a full description of the Mesh Form Modeler, see the Mesh Form Modeling chapter, in your Ray Dream Studio manual.

The following Mesh Form Modeling features have been added to the Selection and Polymesh menus.

Selection Menu.

Fig. 91—The Selection menu
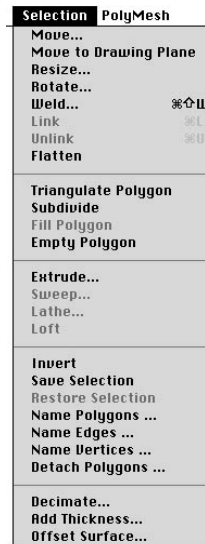
Name Polygons
Name Edges
Name Vertices:

Apply group names to selected polygons or edges. Poser 3 uses these group names to name body parts when importing Hierarchy files to create new figures. See "Creating Figure Models." on page 23 for more information.

Detach Polygons: Separate the current selection into a new polymesh. The edges and vertices in common with the original and the new polymesh are duplicated, so that no polygons are lost. This is useful for breaking up a solid object into individual sections to be used as body parts in Poser 3.

Polymesh Menu.

Fig. 92—The Polymesh menu
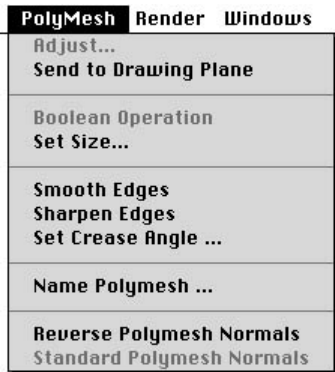
Name Polymesh: Similar to name polygons, this option works on an entire Polymesh. It creates a group name for the polymesh that is used by Poser 3 when importing Hierarchy files to name body parts. See "Creating Figure Models." on page 23 for more information.

Reverse/Standard Polymesh Normals: When geometry is exported to the OBJ format, each polygon is given a direction, called a surface normal.

For some objects, the direction chosen by Ray Dream Studio may be incorrect. It may appear that you are seeing the interior of the object from the front instead of the front faces. Select these parts of the model in the Mesh Modeler, and then use the Reverse Polymesh Normals feature. This forces the OBJ exporter to flip the normals when exporting.

IMPORTING AND EXPORTING OBJ FILES.

The OBJ file format can be used between Ray Dream Studio and Poser 3 in several ways.

- You can create new figures from scratch, using Hierarchy files.
- You can edit Poser 3 geometry to create new morph targets.
- You can create objects in Ray Dream Studio to use as Props in Poser 3.

Importing OBJ Files.

When importing OBJ files, you are presented with the following options.

Group Information: Although Wavefront supports objects having a First or Last name associated with each group, Ray Dream Studio requires there be only one name per group. The Group Information option lets you choose which name to use within Ray Dream Studio.

To import the object as a single polymesh:

⌘ Use the Make Only One Group feature.

Scaling Factor: Define the unit conversion between Ray Dream Studio units and OBJ units. If you are importing Poser 3 geometry to create morph targets, always use the default of 4.00 inches.

Create Meshform Objects: If None is selected, the object is imported as an external object, with the minimum modeler as its default modeler. If One is selected, the object is imported as one meshform object. The object is still broken up by its group names as individual polymeshes within the modeler if you have not used Make Only One Group from Group Information. If One for Each Group is selected, an individual object is created for each group.

Transpose Coordinates: Compensate for the difference in world coordinates between other programs and Ray Dream Studio. Ray Dream Studio has the y and z coordinate axes transposed from other programs, including Poser 3.

Default settings should be used when importing Poser 3 figures.

To import an OBJ file:

1. Select **File menu> Import** or **File menu> Open** to open an OBJ file.
2. Set the file type to Wavefront (*.obj).
3. Select the OBJ file and click Open.

Exporting OBJ Files.

When exporting OBJ files, you are presented with the following options.

Export Normals: Toggles exporting of surface normals on and off. You almost always want this setting turned on.

Export UV values: Toggles exporting of UV texture data on and off. You need this turned on for texturing in Poser 3. Poser 3 only supports UV mapping of figures and props.

Export Full Path For Grouping: If you are saving a number of Ray Dream Studio objects that have been grouped, the groups are saved as Wavefront groups.

Export Texture Maps: Creates a Wavefront Material file to be used with the OBJ geometry file. This file describes how objects are textured. It creates one material for each group.

Transpose Coordinates: Compensates for the difference in world coordinates between other programs and Ray Dream Studio. Ray Dream Studio has the y and z coordinate axes transposed from other programs, including Poser 3.

Degree of Tessellation: Controls the smoothness of the exported object.

Textures Format: If the Export Texture Maps option is turned on and the objects have attributes which must be converted to texture maps, this controls the format of the texture files and their resolution.

To export an OBJ file:

1. Select **File menu> Export** or **File menu > Save As**.

2. Set the file type to Wavefront (*.obj).

3. Click on the Options button to alter the export options.

USING POSER WITH PAINTER 3D.

You can export a figure as an OBJ from Poser 3 and then paint on it as you would any other model.
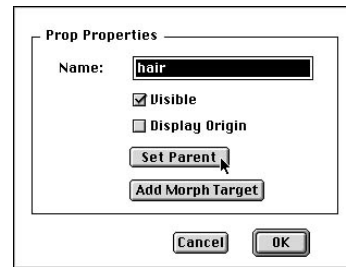
To use a Poser 3 model in Painter 3D:

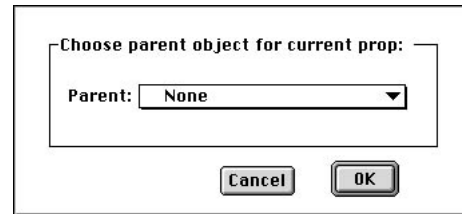1. Create and pose a figure in Poser 3.

Fig. 93—Poser 3 Figure

2. If the figure has hair, do the following steps. If the figure has no hair, skip to step 3.

   • Select the hair prop in the model window.

   • Select **File menu> Edit properties**.

*Fig. 94—Select **File menu> Edit properties**.*

   • Click Set Parent.

   • Click inside the text frame and select None from the pop-up menu.

Fig. 95—Select None.

   • Click OK.

   • In the prop properties dialog, click OK to accept. The hair is now ready to be mapped properly.

3. Choose **File menu> Export> Wavefront OBJ**.

4. Select the Single frame option.

Fig. 96—Select Single frame.
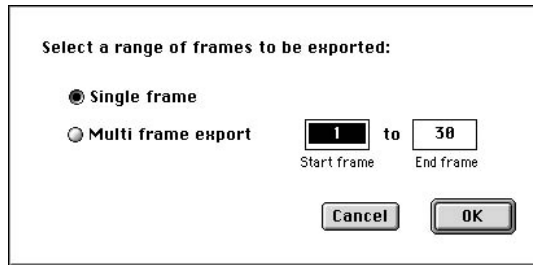
The Export Options dialog is displayed. To keep mapping simple, do not click the Export object groups option.

Fig. 97—Leave Export object groups unselected.
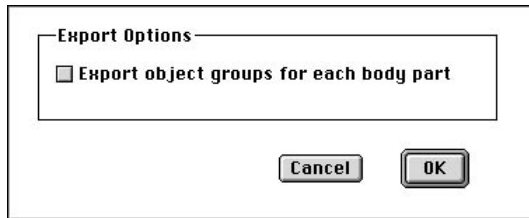
5. Click OK.
6. Open Painter 3D.
7. Choose **File menu> Acquire / wavefront obj**.

The figure appears in the model window.

Fig. 98—Poser 3 figure in the Painter 3D model window.
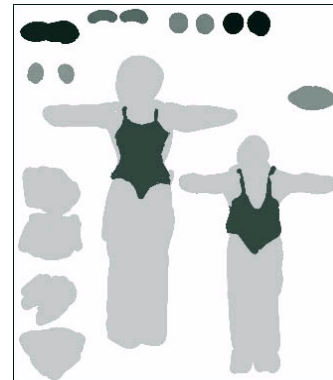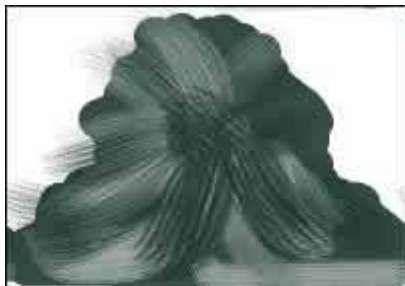

8. Create a texture map for the body and hair.

Fig. 99—Painter 3D texture map.

Fig. 100—Painter 3D hair texture map.

9. Save the texture maps as pict files for use with your Poser 3 model in other applications.

Fig. 101—Painter 3D texture map applied to figure.

USING POSER WITH BRYCE 3D.

You can import Poser 3 Figures as OBJ into any Bryce 3D scene.

To Use a Poser 3 Model in Bryce 3D:

1. Create and pose a figure in Poser 3.

Fig. 102—Poser 3 Figure

2. If the figure has hair, do the following steps. If the figure has no hair, skip to step number 3.

   • Select the hair prop in the model window.

- Select **File menu> Edit properties**.

*Fig. 103—Select **File menu> Edit properties**.*
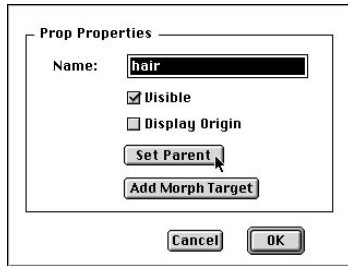
- Click Set Parent.
- Click inside the text frame and select None from the pop-up menu.

Fig. 104—Select None.
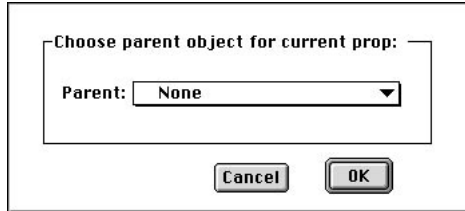
- Click OK.
- In the prop properties dialog, click OK to accept. The hair is now ready to be mapped properly.

3. Choose **File menu> Export> Wavefront OBJ**.

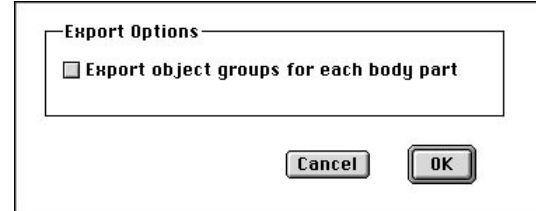4. Select the Single frame option.

Fig. 105—Select Single frame.
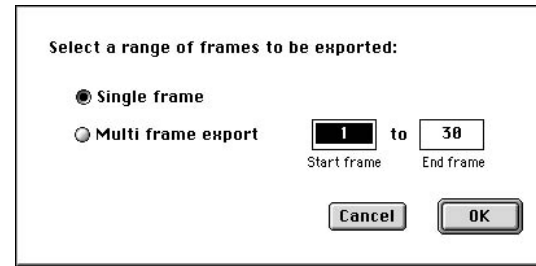
The Export Options dialog is displayed.

To keep mapping simple, do not click the Export Object Groups option.

Fig. 106—Leave Export object Groups unselected.

5. Click OK.
6. Open Bryce 3D.

7. Open or create a scene where the Poser 3 figure is to be placed.
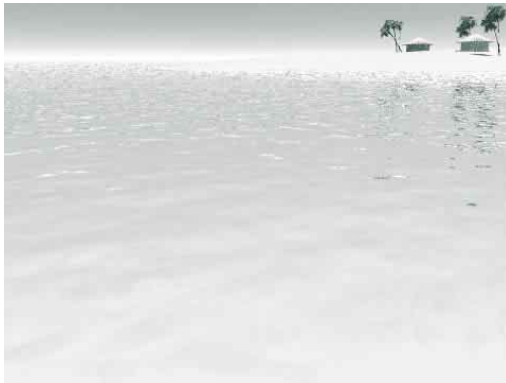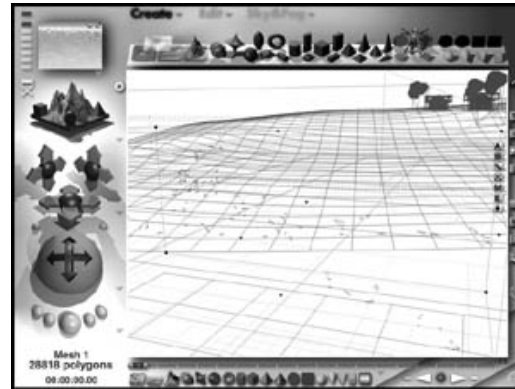
Fig. 107—The unrendered scene.
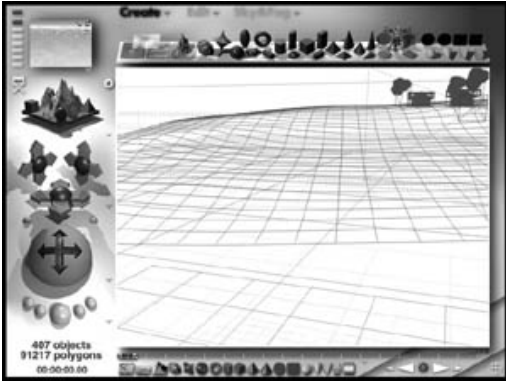
Fig. 108—The rendered scene.

8. Choose **File menu> Import Object** to add the figure to the scene.

9. Scale and position the figure appropriately.

Fig. 109—Scale and position the figure.

10. The figure is placed in the scene with a default gray texture attached.

Fig. 110—The default gray texture.

The hair and body import into Bryce 3D as a group.
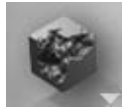
In order to map each part:

- Ungroup the hair and body by clicking the ungroup button, which appears beside the object when selected.

- Select the body to map it first.

To apply a texture map to the figure:

1. Click the figure to select it.

2. Click on the Edit Materials icon in the Edit Palette.

The Materials Lab is displayed.
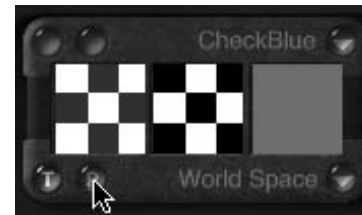
Fig. 111—The Materials Lab.

3. Click column A for Diffuse and Ambient channels.

Fig. 112—Select Diffuse and Ambient channels.

4. Click the Image Texture button in material A.

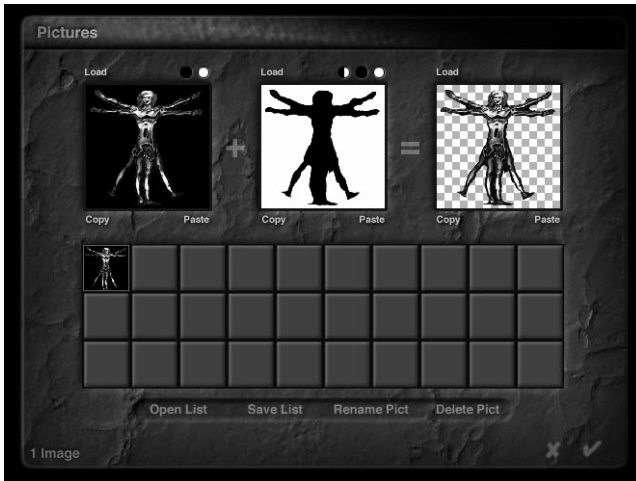*Fig. 113—The Image Texture button.*

5. Set the mapping mode to parametric and click the Texture Source Editor button in material A.
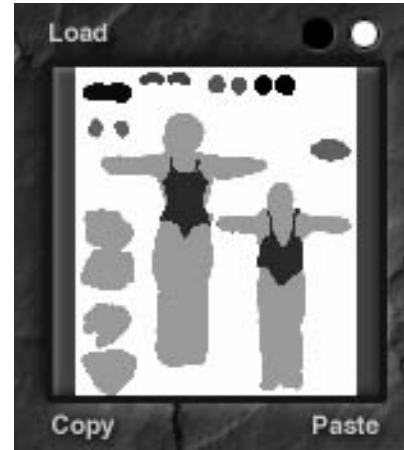
Fig. 114—The Texture Source Editor button.

The Texture Source Editor is displayed.

Fig. 115—The Texture Source Editor.

6. Click Load (above the first large pict box).
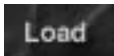
7. Apply texture map(s) with one of the following methods.

   • Select and open the pict file texture you created in Painter 3D, see for directions on creating a Painter 3D texture file for a Poser 3 model.

   • Use the default texture from Poser 3 by opening Poser/Runtime/Textures/Poser3/... and select the appropriate texture that was used in the Poser 3 file. Poser 3 renders as a multiplication of the texture and body part color.

• Open the Poser 3 pict file in an image editing application (such as Painter 5 or Photoshop), edit the colors, add patterns, then save the file under a new name as a pict to use with your figure.

• Or, you can use Bryce 3D's own textures to create "surreal" figures (rock, glass, etc.).

Fig. 116—Open the Painter 3D texture file.

8. Click on the black dot above the second large pict box to delete the mask.

9. Click on the check mark to accept the deletion.

10. Adjust other material channels appropriately.

For this scene, the specularity and reflection were increased to make the swimmer look wet.

11. Click on the check mark to accept material.

Fig. 117—The final results.

12. With the hair selected, repeat steps 2-11 to apply the hair texture.