INTRODUCING

SuperMesh™

Mesh Geometry Extension

for Ray Dream Designer™ and Studio™

Version 2.0 for PowerMac and Windows PC

Welcome

Welcome to SuperMesh™, the premier mesh geometry extension for Ray Dream Designer and Ray Dream Studio. SuperMesh is ideal for creating objects that are difficult or impossible to create with Ray Dream's freeform modeler.

With SuperMesh, you can create fantastic organic models with geometry that is planar, cylindrical, or spherical. And, if you have Ray Dream Studio, you can even animate that geometry over time, using movies in QuickTime (Mac) or AVI (PC) format.

SuperMesh 2.0 adds an advanced mesh simplification algorithm, which makes each mesh use fewer facets, while retaining the accuracy of the SuperMesh surface. Now your SuperMeshes are even faster!

The SuperMesh package includes:

- program files that extend the capabilities of Ray Dream Designer or Ray Dream Studio,
- sample Ray Dream Designer and Ray Dream Studio files, and
- step-by-step instructions for installation and use (this document).

If you are missing any of these items, please contact your dealer or distributor, or see the Getting Help section at the end of this manual.

NOTE: SuperMesh Version 2.0 is available for both Power Macintosh computers, and Intel-based PC's running Windows (Windows 95 or Windows NT). Most of the illustrations in this manual depict the Macintosh version of SuperMesh. The Windows dialogs are identical in layout, however, so you can move between the Mac and PC versions with ease.

QuickStart Guide

If you're already familiar with mesh geometry, or you just don't like to read manuals, start here to begin making mesh objects right now!

Otherwise, continue on to the next section for a more detailed explanation of how to get started with SuperMesh.

1. **Quit** Ray Dream Designer/Studio, if it is already in use.

2. **Install** SuperMesh, using the Ray Dream Installer. Choose "Custom Install" and select "SuperMesh".

3. **Start** Ray Dream Designer/Studio.

4. **Drag the SuperMesh icon**  to the Perspective window.

5. **Type your registration code** into the dialog box that appears. (This dialog will appear only once).

If you are using:	**Your registration code will look like this:**
Macintosh or Windows PC	ZA-XXX-X-XXXX-XXXX, or ZA-XXX-X-XXXX-XXXXX
upgrade from Windows version of SM 1.0	ZB-XXX-X-XXXX-XXXX, or ZB-XXX-X-XXXX-XXXXX

6. In the SuperMesh dialog box, **click on the floppy disk icon**  and **select** an image or movie file.

7. **Click on OK** to close the SuperMesh dialog box.

8. **Render**.

9. Play. Experiment. Have fun!

Installation

System requirements

SuperMesh will run on any computer that runs **version 5.0** (or later) of Ray Dream Designer or Ray Dream Studio. Please see the Ray Dream User Guide for specific system requirements for these software packages. If you have an earlier version of Ray Dream Designer or Studio, an upgrade may be available. Contact MetaCreations for details.

Installing on the Macintosh/Power Macintosh

1. If Ray Dream Designer/Studio is running, select Quit from the File menu to stop it.
2. Insert the Ray Dream Extensions CDROM into your CDROM drive.
3. Double click on the Ray Dream installer icon to begin installation. Click on "Continue...", and change "Easy Install" to "Custom Install".
4. Use the scroll bar to scroll down until you see SuperMesh. Click on the checkbox to the left of "SuperMesh" to select it. Click on "Install" to begin copying SuperMesh to your Extensions directory. Documentation and sample images are in the "Third Party Extensions" folder on the CDROM.
5. Start Ray Dream Designer/Studio. The first time you use SuperMesh, you will be asked for your **Registration Key**. If you type in a valid key (which you can obtain by purchasing SuperMesh), SuperMesh will be fully functional.

If you click on Cancel instead of typing in a valid Registration Key, SuperMesh will still allow you to create mesh objects, but the mesh is automatically limited to 4x4 (demo mode).

Installing on a Windows 95 or Windows NT Intel-based PC

1. If Ray Dream Designer / Studio is running, select Exit from the File menu to stop it.
2. Insert the Ray Dream Extensions CDROM into your CDROM drive. Installation will begin automatically after a few seconds.
3. Click on “Install Ray Dream Studio...”. Click on “Next>” twice, select “Custom Install”, and click on “Next>” again.
4. Uncheck everything except SuperMesh. Click on the check marks to toggle a selection. Click on “Next>” until copying begins. Documentation and sample images are in the “Third Party Extensions” folder on the CDROM.
5. Start Ray Dream Designer / Studio. The first time you use SuperMesh, you will be asked for your **Registration Key**. If you type in a valid key (which you can obtain by purchasing SuperMesh), SuperMesh will be fully functional.

If you click on Cancel instead of typing in a valid Registration Key, SuperMesh will still allow you to create mesh objects, but the mesh is automatically limited to 4x4 (demo mode).

Basics

Introduction

This section gives you an overview of what the SuperMesh extension does, and how to get started creating simple mesh objects.

What SuperMesh does

SuperMesh creates a new object in your scene by examining a two-dimensional (2D) image, and creating a surface based on that image. The height at each point in the mesh depends on the luminance (brightness) value of the image at each corresponding mesh point.

SuperMesh does this in six steps:

- First, it creates a rectangular mesh containing the number of points that you specify, and it figures out where the location of the corresponding points are in your 2D image.
- Second, it converts the colors it finds in your image at each point to monochrome (brightness) values, using a standard formula. If you start with a black and white image, no conversion is necessary. (In this case, SuperMesh will use the black and white values (usually 0 to 255) directly.)

Expert Note: SuperMesh uses the most modern conversion formula available, one that best matches modern television standards. This formula may differ from other color-to-luminance formulas you have seen in the past. The formula used by SuperMesh is:

luminance = 0.212 * red + 0.715 * green + 0.073 * blue

- Third, points in the mesh are raised up in the Z direction by values proportional to the luminance values found in your image. The brighter the pixels in your image are, the higher the corresponding mesh points will be.
- Fourth, if you turn on the Simplify Mesh option, vertices will be thrown out and facets will be merged, to reduce the number of facets in the mesh while retaining the original shape of the mesh. [NOTE: This feature is new to version 2.0]
- Fifth, if you tell it to do so, the mesh will be curved around a cylinder or sphere. You can select the amount of curvature you want, from zero (flat) to one hundred percent (fully curved).
- Finally, triangles are created to connect the mesh points, and texture mapping (shading) is applied.

Getting ready

Creating an image file

SuperMesh needs an image file, so it can calculate how high to raise each mesh point in the surface. PICT and TIFF are common file formats used for image files on the Macintosh. BMP is a common file format used on Windows PC's. The PhotoShop 2.5 format (PSD) is one format that can be used on both Mac and PC platforms.

SuperMesh uses the same file formats used elsewhere in Ray Dream Designer and Studio. In the future, when Ray Dream supports more image formats, SuperMesh will automatically be able to read those formats as well.

You can create the required image file any way you want, but some ways are typically easier than others:

- Adobe Photoshop™ -- this application can do just about everything. There are many free and commercial plugins available that extend the capabilities of Photoshop, making it easy to create unusual effects. Unusual 2D effects will tend to produce unusual 3D surfaces. Experimentation is the key! Available on both Macintosh and Windows.
- Pico -- a public domain program that does image processing. It can also generate monochrome images based on mathematical formulas. Sometimes this is just what you need to feed into SuperMesh, for example, to make complex beveled surfaces. Available on the Macintosh.
- scan in an image -- using software provided with your desktop or handheld scanner, you can create an image file directly from a photograph or hand drawn picture. Scanners are available for both Macintosh and Windows.
- Use Ray Dream itself -- using a flat plane, and the built-in texture editors, you can make a variety of interesting image files for use with SuperMesh.

Movies can be created using:

- Adobe Premiere™ -- Premiere does for movies what Photoshop does for still images. It's a great way to create, edit, and compress movies. Available on both Macintosh and Windows.
- digitize a movie -- using a video capture board, you can create QuickTime and AVI movies from your camcorder footage. Video capture devices are available for both Macintosh and Windows.

Using SuperMesh

You don't have to do anything special to launch the SuperMesh extension. Ray Dream Designer/Studio will launch it automatically when it's needed.

Figure 1. SuperMesh icon in the Toolbar

This icon represents a SuperMesh object, and it works the same way other primitive objects like spheres and cylinders do. You can:

1. Click once on the SuperMesh icon. Your cursor changes to a cross when in the Perspective window.

   Then, click and drag in the Perspective window where you want the mesh object to be. Ray Dream will automatically open the SuperMesh dialog box in the perspective window, where you can specify exactly what kind of mesh object you want to create.

   OR,

2. Click and drag the SuperMesh icon to the Perspective window.

   OR,

3. Click and drag the SuperMesh icon to the Timeline window.

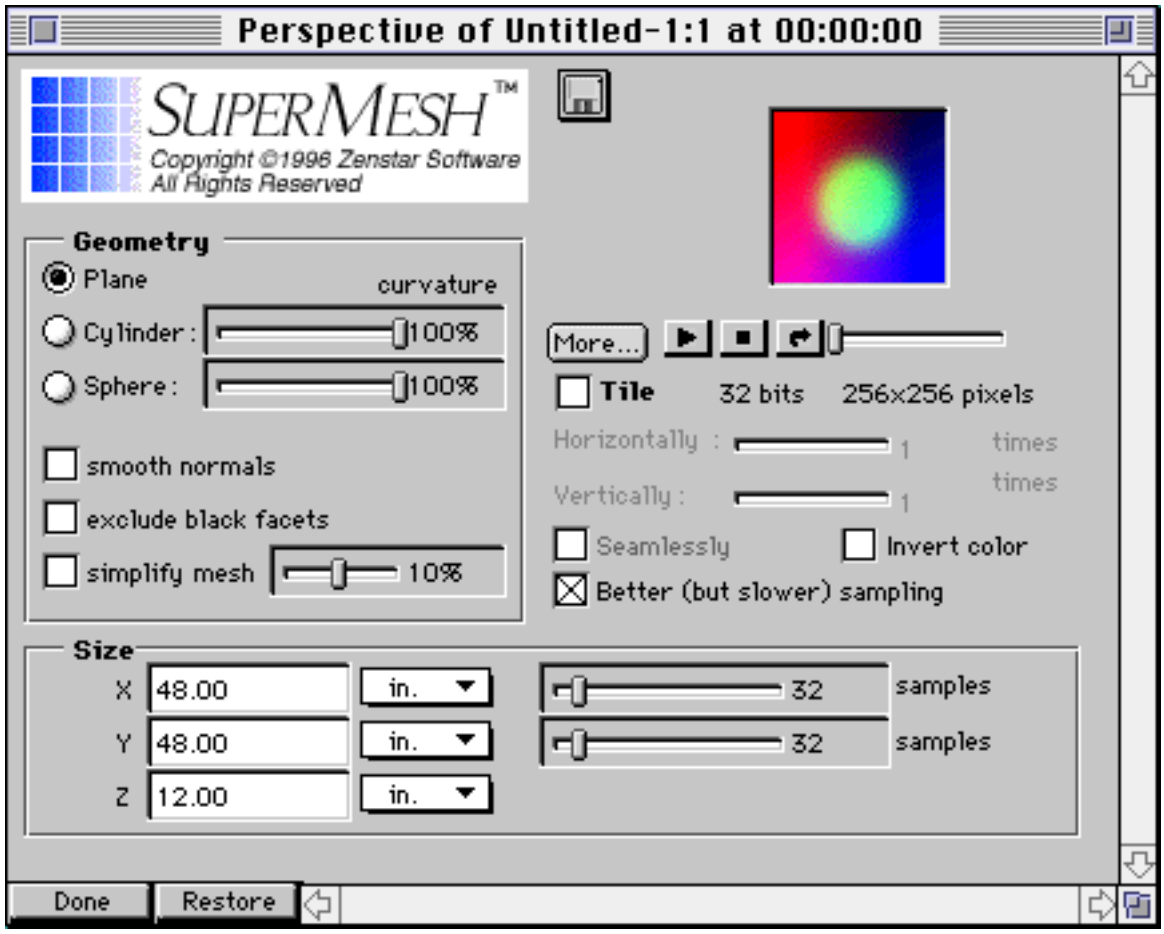

Figure 2. SuperMesh dialog (Macintosh)

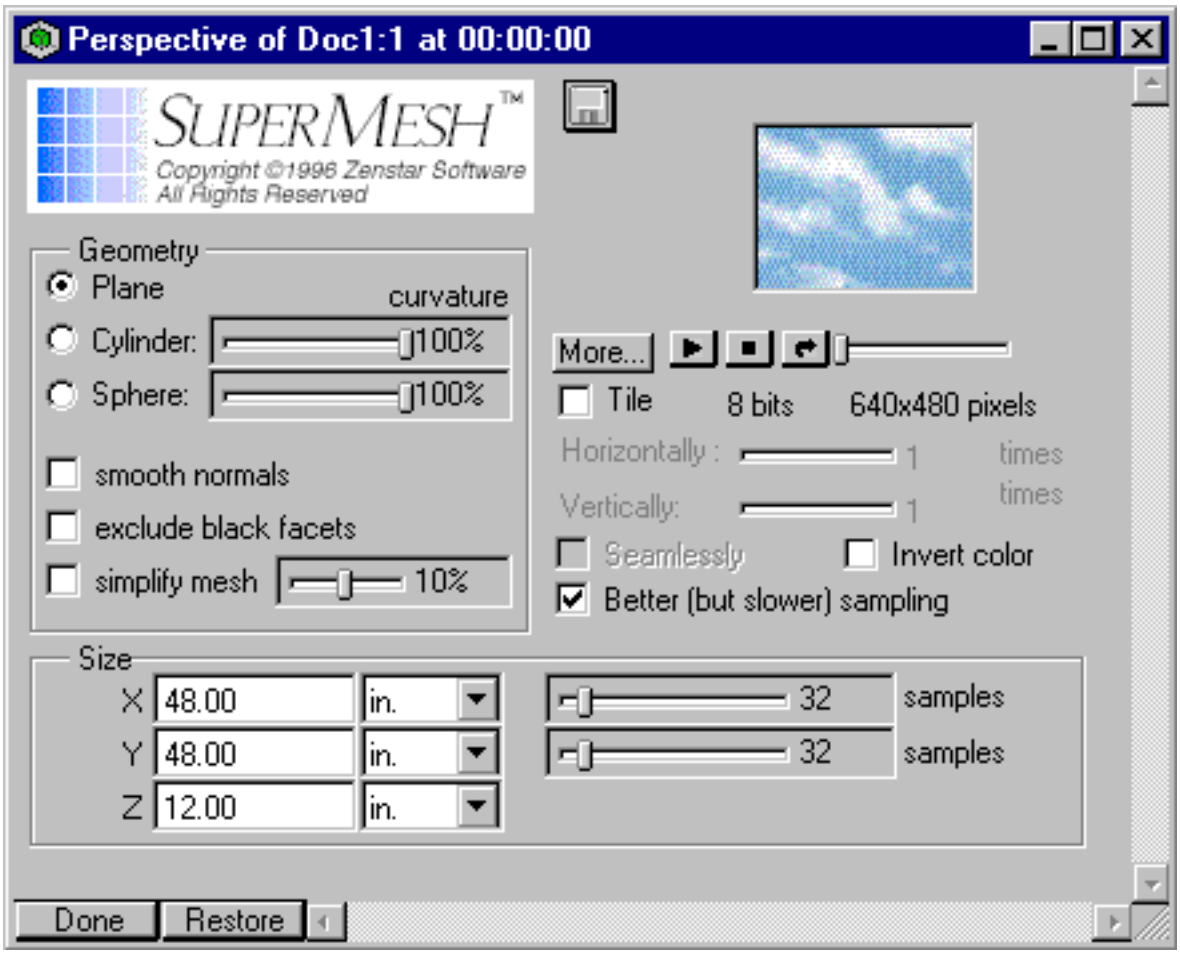

Figure 3. SuperMesh dialog (Windows PC)

Selecting an image file to use

Next, you need to tell SuperMesh which image to use for the geometry of your mesh object:

1. Click once on the floppy disk icon  to bring up a file dialog.
2. Use the file dialog to find and select your image file, and click on OK.

If you can't see your image file in the file dialog, it might be that the file is in a format that Ray Dream can't understand. See your Ray Dream documentation for a list of supported file types.

NOTE: When using a single still image (for example: a TIFF format file) to control geometry, the type in the file dialog will actually be called "Sequenced" (for example: "Sequenced TIFF"). This is because a single frame sequenced movie is the same as a single still image file.

Figure 4. The file dialog finds both sequenced and non-sequenced image files

NOTE: The image files (still or movie) are always stored externally, like all other movie components.

Selecting a mesh type

SuperMesh can create three different kinds of surfaces:

- planar (flat),
- cylindrical (like a tube), or
- sphere (like a round ball).

Figure 5. Source image, 256x256 pixels

Figure 5 was created using the Expert Color Paint airbrush feature. First, the face was drawn using black paint in the airbrush. Then, the entire image was inverted, using the Image/Invert feature, so that the face geometry would be raised up (Z > 0), and the background would be at Z=0.

Starting with the 2D image shown in figure 5, SuperMesh creates the plane geometry, and places it parallel to the XY plane, as shown in figure 6. Pixels that are black (brightness = 0) are lowest in Z, and white pixels (brightness = 255) are highest.

Figure 6. Planar geometry

With cylindrical mapping, black pixels result in the smallest radial distance, and white pixels give you the greatest radial distance. The minimum radial distance means right on the cylinder. As a result, a completely black image file will give you exactly a cylinder shape.

We'll explain cylinder curvature later, in the Advanced section. For now, if you want a cylinder, make sure the curvature is set to 100%.

Figure 7 shows how the cylindrical mesh is created and placed in your scene. The axis of the cylinder is parallel to the X axis.

Figure 7. Cylindrical geometry

Spherical mapping works the same way. Black pixels result in the smallest radial distance, and white pixels give you the greatest radial distance. The minimum radial distance means right on the sphere. So, a completely black image file will give you exactly a sphere shape.

We'll explain spherical curvature later, too, in the Advanced section. For now, if you want a sphere, make sure the curvature is set to 100%, and set the X size to be exactly half the Y size.

Figure 8 shows how the spherical mesh is created and placed in your scene. The axis of the sphere is parallel to the X axis.

Figure 8. Spherical geometry

Selecting a mesh size

Next, you need to decide how big your surface should be. The X and Y sliders change the size of the mesh BEFORE the mesh is warped onto a cylinder or a sphere. So, if you want a cylinder or sphere of a particular radius R, set the Y dimension to be 2 * pi * R. (Pi is about 3.1416, if you want to calculate this using a calculator that doesn't have a pi key.)

NOTE: In the case of a sphere, the X dimension is stretched from the north pole of the sphere to the south pole, while the Y dimension is stretched all the way around the equator. At 100% curvature, the 2D image is always stretched to exactly wrap around the sphere. At 0% curvature, there is no stretching in X at all, and the flat surface will be exactly the size you specify in the dimensions part of the dialog. So, if you want the least amount of stretching distortion, your X size should usually be set to exactly one half the Y size. If you make it bigger or smaller than this, your sphere might not render exactly the way you expect.

Selecting the number of samples

Each point in the mesh represents one brightness sample from your image. You control exactly how many samples will be taken in X and Y directions. Because we're building a mesh of squares, each square grid is further split into two triangles. But, be careful! Selecting high numbers of samples can quickly create very large numbers of triangles, which take longer to create and render.

For example:

Samples in X	64
Samples in Y	64
Total samples =	64 * 64 = 4096
Total triangles =	(64-1) * (64-1) * 2 = 7938

Tip: For maximal speed, use the fewest number of samples that you can get away with. The more samples you select, the more triangles in your scene, and the slower it will be rendered. When making draft images, you can keep the number of samples low. When you're ready to render the final image, double click on the SuperMesh object in the Perspective window to open up the SuperMesh dialog, and bump up the number of samples to a higher value. See the Advanced topic, Simplifying Mesh Geometry, for another way to increase speed.

Selecting a smoothing style

SuperMesh provides two different “looks” for the mesh objects it creates. With smooth normals OFF (the default, shown in figure 9), each triangle is a separate facet, similar to the facets on a diamond. Each facet will reflect light the same way across the entire facet surface.

With smooth normals ON, the normal vector is calculated separately at each triangle vertex, resulting in a very smooth looking surface. Because it takes more calculations to do this, turning smooth normals on will result in a slight delay in creating the surface.

Figure 9. Smooth normals OFF (default)

Figure 10. Smooth normals ON

Tip: When doing draft images, turn smooth normals OFF, so the mesh will take less time to calculate. Turn smooth normals back ON when you’re ready to do your final rendering.

With smooth normals ON, and at higher X and Y resolutions, small distortions in your 2D image can turn up as visible “bumps” in the final 3D smoothed image. To eliminate this bumpiness, either reduce the number of samples, or use a filter (like PhotoShop’s Gaussian Blur filter, 1 to 3 pixels wide) to smooth out the distortions in your 2D image before using it

in SuperMesh.

Removing black facets

Sometimes you don't want a rectangular mesh object, which is the default. By turning Include Black Facets OFF, you can delete all the triangles that have three black (brightness = 0) vertices. Make sure that you have set up your image file appropriately!

Figure 11. include black facets ON (default)

Figure 12. include black facets OFF

Texture mapping

Textures can be mapped onto your mesh object using the same steps you use to shade any Ray Dream object. Simply click on a shader in the Shader Browser, and then click on the Apply button. Or, you can drag and drop a shader directly onto a mesh object.

The shader is applied using the same orientation used to create the mesh geometry. This allows you to use the same map for texture that you use for geometry, if you want to.

Figure 13 is a sample image file used by a shader. Figure 14 shows a mesh object, with the shader from Figure 13 used to set the color of the mesh object. In this figure, smooth normals are turned on, to give a smooth surface appearance.

Figure 13. Sample texture map, 256x256 pixels

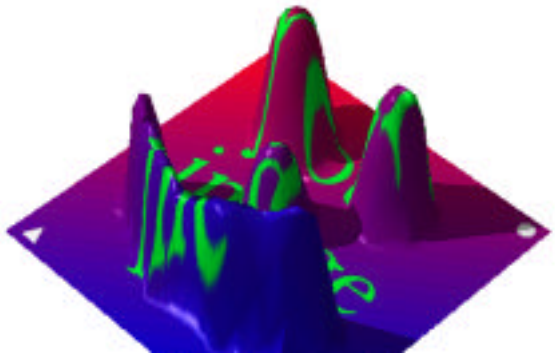

Figure 14. Texture mapped onto mesh object

Advanced features

Now that you understand the basics of mesh object creation, let's look at three advanced SuperMesh features:

- using a movie to control mesh geometry,
- adaptive mesh simplification using the Simplify Mesh control, and
- dynamically changing the curvature of a cylinder or sphere.

Animating mesh geometry

If you are using Ray Dream Studio, you can specify a movie for the geometry map, instead of a static two-dimensional image. This gives you geometry that changes over time, according to the brightness of pixels in the movie.

With movie slider controls, you can set the start and end point of the movie. Ray Dream Studio will take care of smoothly interpolating the frame number, as your animation is generated.

Figure 15 shows a plane-style mesh object whose geometry comes from a movie. In this example, the shading is constant, but by applying a Movie shader, you can also dynamically change the texture of the surface of your object.

NOTE: When you use a movie (QT or AVI) to control geometry, you must manually create a keyframe on the timeline to set the end frame of the movie. If you don't set the end frame, only the first frame of the movie will be used, and your geometry will not appear to animate .

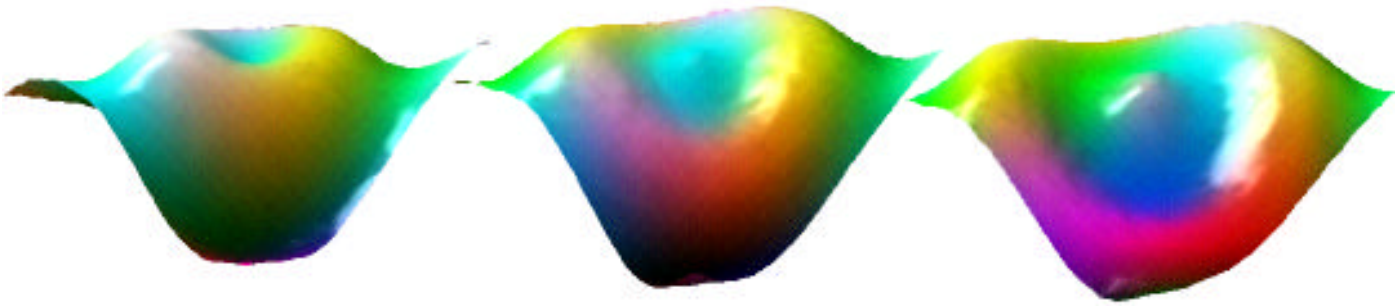

Figure 15. Animated planar geometry

You can also apply movies to cylinder or sphere geometry.

Simplifying mesh geometry

When your greyscale image contains many fine details, it often requires a high sample resolution to represent the mesh exactly. If the mesh resolution is too low, details will be left out. Unfortunately, if you set the mesh resolution to a high value (like 256 in X and Y), a very large number of facets is created, and manipulating and rendering your geometry slows down.

Version 2.0 of SuperMesh includes a new feature, adaptive mesh simplification, which can greatly reduce the number of triangles in the mesh object, while retaining as much of the detail as possible.

Typically, simplified meshes use only a fraction of the number of facets in a non-simplified mesh.

To simplify your mesh, simply turn on the Simplify Mesh option in the SuperMesh dialog. You will probably want to bump up the X and Y sample resolution as well, to give the mesh simplifier more vertices to work with.

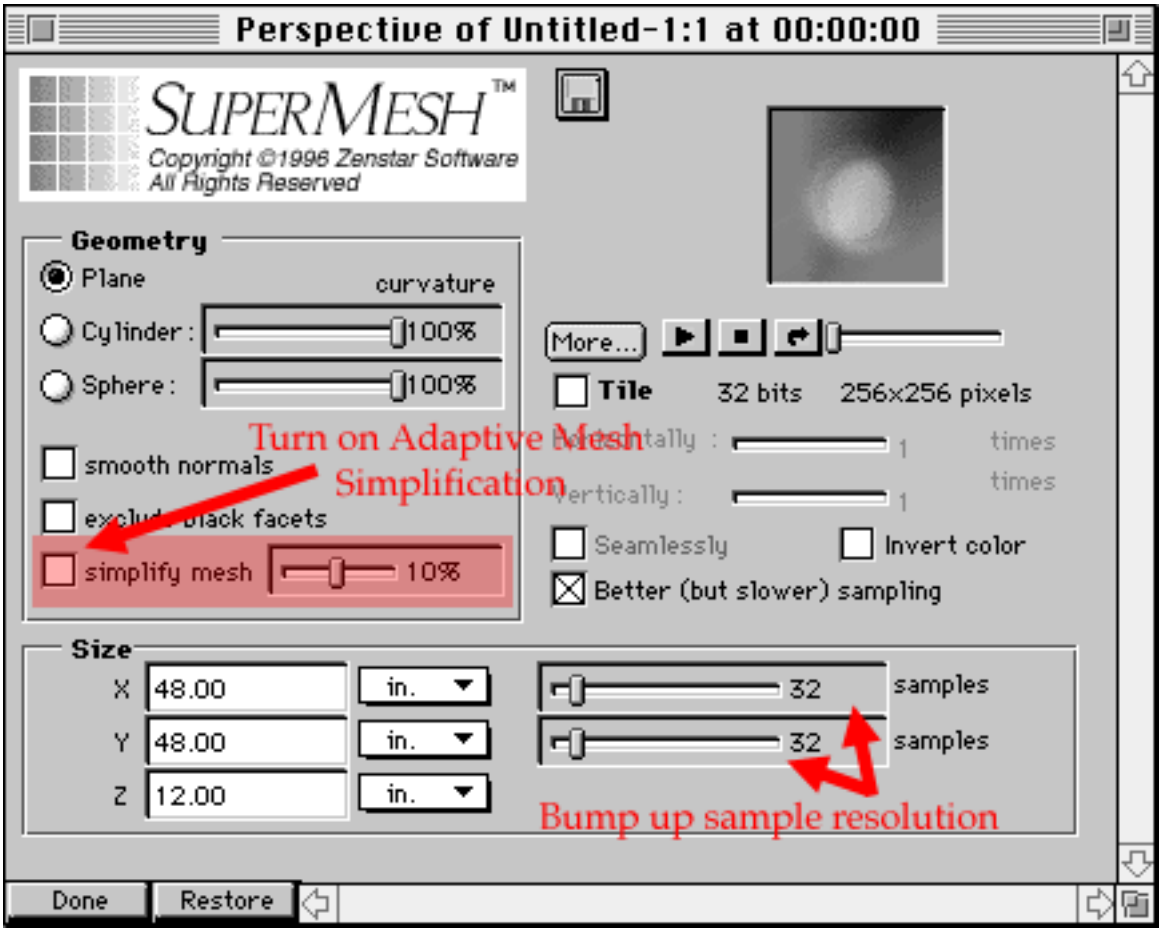

Figure 16. Texture mapped onto mesh object

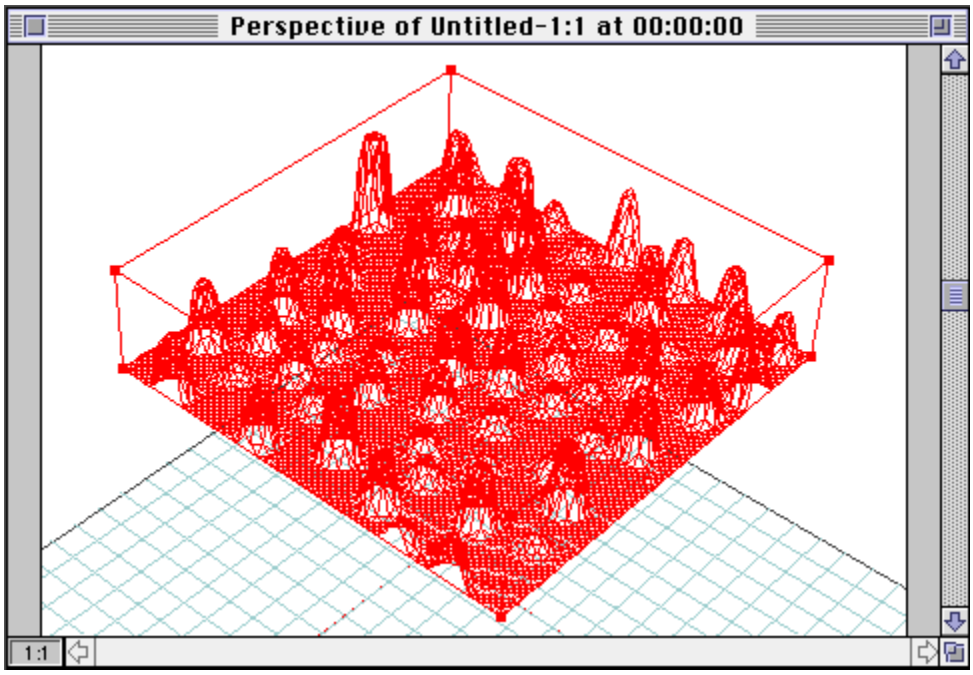

Figure 17. 64x64 samples, Simplify Mesh off = 7938 triangles

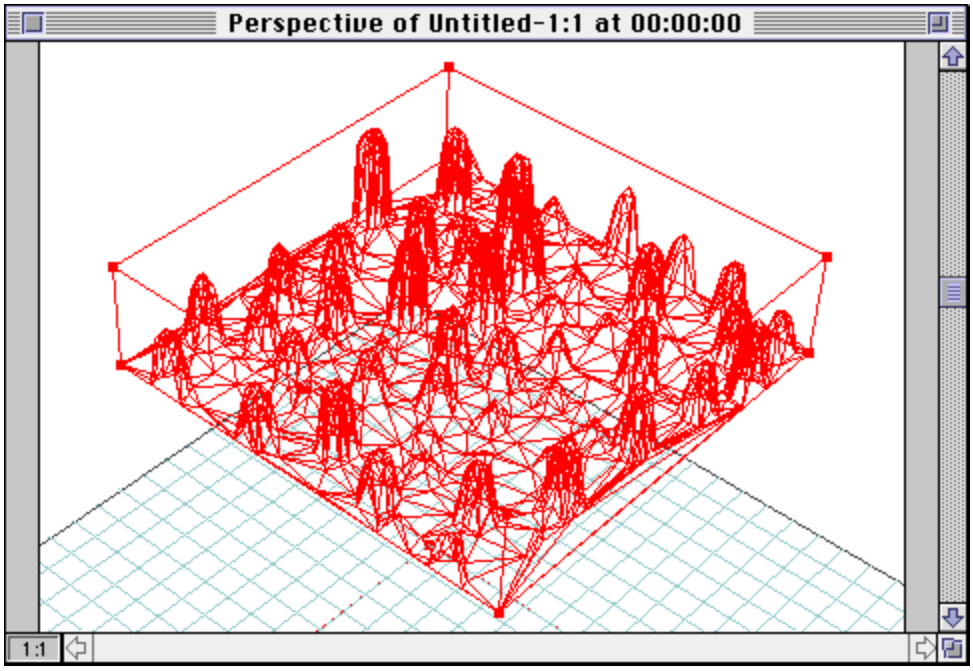

Figure 18. 256x256 samples, Simplify Mesh 20% = 2563 triangles

Note that the geometry of the bumpy surface is maintained, but the number of triangles is reduced. More triangles are used where the surface is curvy, fewer where the surface is not.

Changing cylinder and sphere curvature

Using the curvature slider controls, you can statically or dynamically change the curvature of cylinders and spheres.

For a cylinder, a curvature of 50% results in a half-cylinder. A line through the center of the cylinder is parallel to the X-Y plane.

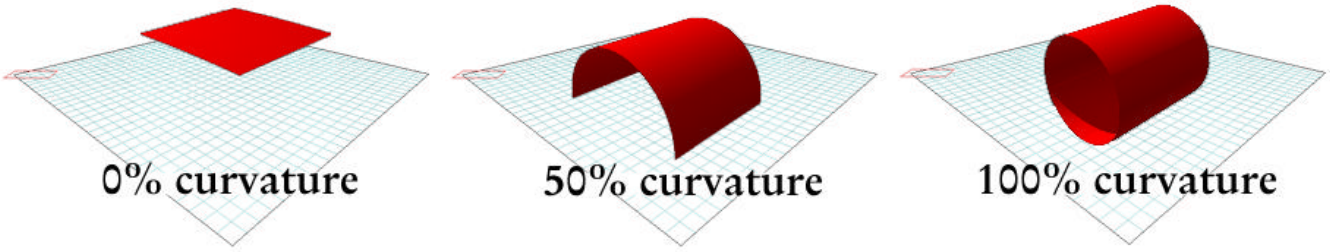

Figure 19. Cylinder curvature

For a sphere, a curvature of 50% wraps the surface halfway around the equator (in the Y direction), and halfway toward each pole (in the X direction). A line through the poles of the sphere is parallel to the X-Y plane.

Figure 20. Sphere curvature

Note that a 50% curvature sphere is *not* the same as a half-sphere (hemisphere). To create a hemisphere, use a 2D image map that is completely black in the lower half of the image, and turn Include Black Facets OFF.

Making changes to existing SuperMesh objects

Once you've created a SuperMesh object, you might want to modify the SuperMesh parameters, without deleting and recreating the object. There are two ways to do this:

First method:

In the Perspective window, double click the SuperMesh object (left mouse button on the PC).

Second method:

1. Click on the "Objects" tab in the Timeline window.
2. Double click on "SuperMesh" to bring up the SuperMesh dialog.

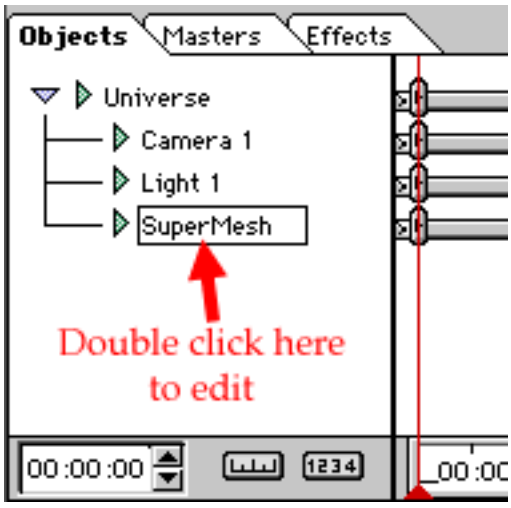

Figure 21. Changing SuperMesh parameters for an existing object

3. Click on DONE when you are done modifying the SuperMesh parameters.

Step-by-step tutorial

This section explains how to create the floating die image shown below. This image illustrates many of the techniques you will use to construct other SuperMesh objects.

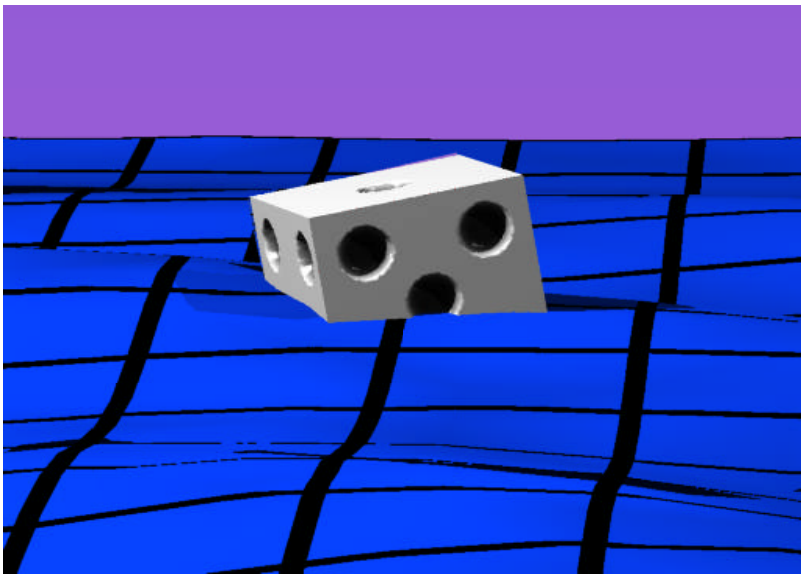

Figure 22. Floating die

Make a 2D grayscale image for one side of the die

1. Using your favorite paint package (in this case, I used Expert Color Paint™), create a 256x256 pixel grayscale image (256 grays).
2. Clear the background to white (255).
3. With an airbrush tool, paint five spots in the traditional locations for a die, and save the file as DIE.5.

Figure 23. DIE.5.PICT

Make 2D images for the other sides of the die

4. Using the same image, erase one pip in the center. Save as DIE.4.PICT.

5. UNDO, and erase two diagonal pips. Save as DIE.3.PICT.

6. Erase the center pip, and save as DIE.2.PICT.

7. UNDO, and erase two outside diagonal pips, and save as DIE.1.PICT.

8. Reopen DIE.5.PICT, and copy the center pip. Drop copies at the top and bottom, between the other pips. Erase the center pip. Save as DIE.6.PICT.

Create mesh objects for all 6 sides of the die

9. Start Ray Dream Designer, and create a new scene using the Scene Wizard. Select Photo Studio, lighting = Left 100%/Right 30%, no background, and no props.

10. Click on the SuperMesh™ icon, then click and drag in the Perspective window, to create a SuperMesh object. Specify:

X size = 48 inch, X resolution = 16

Y size = 48 inch, Y resolution = 16

Z size = 4 inch

11. Click on the floppy disk icon, and specify the file DIE.5.

12. Click to enable “smooth normals” and “better (but slower) sampling”, and click on OK to create the mesh.

13. Open the Numerical Properties window, and set the properties of the DIE.5 mesh

to:

X position = 20

Y position = 0

Z position = 0

Yaw = 0 degrees

Pitch = 90 degrees

Roll = 0 degrees

14. Repeat steps 7 through 10, to create the other sides of the die, using the following settings:

SuperMesh settings						
image file	DIE.1	DIE.2	DIE.3	DIE.4	DIE.5	DIE.6
x size (in)	48	48	48	48	48	48
y size (in)	48	48	48	48	48	48
z size (in)	4	4	4	4	4	4
x samples	16	16	16	16	16	16
y samples	16	16	16	16	16	16
Numerical Properties settings						
x position	0	-20	0	0	20	0
y position	0	0	20	-20	0	0
z position	20	0	0	0	0	-20
yaw	0	180	90	-90	0	0
pitch	0	90	90	90	90	180
roll	0	0	0	0	0	0

Table 1. Settings for sides of the die

Arrange the sides of the die

15. Select all six mesh objects, and group them.

16. Scale the die down (proportionally) to about 12 inches in X, using the Numerical Properties window.

Setup shaders for the die

17. Using the Shader browser, create six textures, with the DIE.* files as the Color portion of the shader.

18. Select a mesh object, say the one built from DIE.1.PICT, and apply the corresponding shader built from DIE.1.PICT.

19. Repeat step 15 for the other 5 sides of the die.

Create the water

20. Using a paint program, create a smooth flowing area of gray. In this particular case, I used Fractal Design Dabbler™, with a plugin called “Expression” (Expression evaluates an algebraic expression at each pixel, and sets RGB or gray values accordingly. It is a free Photoshop plugin, and is available on the net).

Expression settings:	grays
I:	0.2*cos(Dist(x-100,y-50)/10) +
	0.2*cos(Dist(x+100,y-75)/15) +
	0.2*cos(Dist(x+100,y+50)/20)
min:	-0.6
max:	0.6

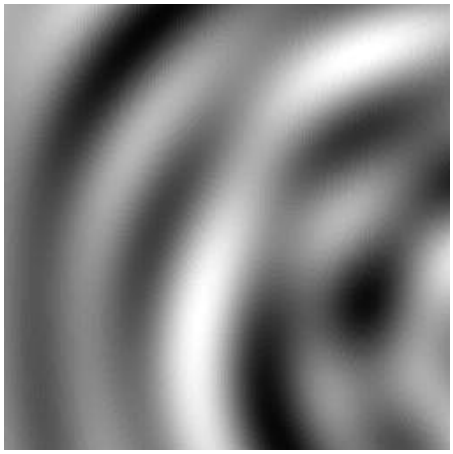

Figure 24. Result of Expression plugin

This adds together three cosine functions to make nice ripples of gray. The resulting pixel values are gray, and go from 0 (when all three cosines are -1) to 255 (when all three cosines are +1).

21. Cut out a 256x256 pixel area of the image you just created, and save as RIPPLES.1.PICT.

22. In Ray Dream, click on the SuperMesh icon, then click and drag in the Perspective window to create another SuperMesh object. Specify:

X size = 100 inch, X resolution = 32

Y size = 100 inch, Y resolution = 32

Z size = 4 inch

23. Click on the floppy disk icon, and specify the file RIPPLE.1.PICT.

24. Click to enable “smooth normals” and “better (but slower) sampling”, and click on OK to create the mesh.

Set up a shader for the water

25. Create a new shader. Select Composite, and set the controlling function to Wires, with parameters: H and V Count = 20, H and V height = 8%.

26. Apply the shader to the water mesh object.

Put them together

27. Arrange the die in the scene. Set Yaw and Pitch of the die to about 10 degrees, so the die appears to be floating in the water. Make sure that the water cuts into one of the pips on the die, so it appears to "flow" into the die.

28. Select each side of the die in turn, and open the Object Properties window on it. Change the X and Y resolution for each side of the die to 64, in preparation for final rendering.

29. Render at 512x384 pixels, with silhouette set to 200%.

30. Save the file.

Technical Support

Possible problems

No Mesh Icon in the Ray Dream toolbar

This can happen if the SuperMesh files are not placed in the correct folder. Open that folder from the Finder ('Ray Dream Extensions' on the Macintosh, 'Ext' on a Windows PC), and check to make sure you put the SuperMesh files in the right place.

Out of memory error

Ray Dream Designer and Ray Dream Studio use memory to store all the triangles that make up your models. If SuperMesh fails to start correctly when you try to create a SuperMesh object, Ray Dream could be running out of memory. If this happens, you can do one of two things:

1. give Ray Dream Designer/Studio permission to use more memory. First, while in the Finder, click on Ray Dream Designer/Studio, choose Get Info... from the Finder's File menu, and increase the number shown there for Preferred Size.
2. purchase more physical memory for your computer.

"Bumpy" images, with smooth normals ON

Setting X and Y samples to high values can sometimes bring out bumpiness in the final 3D image, which you can't see in the 2D image you gave to SuperMesh (but it's there!). To eliminate this bumpiness, reduce the number of X and Y samples, using the SuperMesh sliders.

Alternately, you can use a filter, like PhotoShop's Gaussian Blur filter, to smooth out the small distortions in your 2D image, before you give it to SuperMesh. With PhotoShop, a Gaussian Blur of between 1 and 3 pixels wide will usually remove all such artifacts.

Mesh is oriented wrong

If the resulting 3D geometry is facing a direction you don't like, you can use the Numerical Properties window to re-orient the object. This window works exactly the same way on SuperMesh objects as it does on other Ray Dream objects.

I'm using a movie to animate geometry, but my geometry doesn't move

You must manually set the last event for a movie, or only the first frame will be used. First, create a keyframe at the end point. Open the SuperMesh dialog (see "Making changes to existing SuperMesh objects"), and drag the slider to set the end point. Close and render.

My geometry is distorted, when I try to create a sphere with it

SuperMesh always ensures that when sphere curvature is 100%, that your source file wraps exactly around the sphere from pole to pole, and all the way around the equator. Because the distance from one pole to the other is exactly one half the distance all the way around the equator (think about it!), SuperMesh will try to scale your geometry accordingly. For minimal distortion, make sure that the X size you choose in the SuperMesh dialog is exactly one half the Y size.

SuperMesh can't read my image file

Here are the formats that are understood by SuperMesh when used with Ray Dream 4.1. (Each version of Ray Dream may support different formats).

Macintosh only:	PhotoShop 2.0, PICT, QuickTime
PC only:	Targa, PhotoPaint, TIFF, BMP, PCX, AVI
Both:	PhotoShop 2.5, GIF, JPEG

You can use a commercial utility like DeBabelizer or a shareware utility like GraphicConverter to convert image files from one format to another. (There are many other utilities that do format conversion. Use the one you like the best!)

Simplify Mesh ON makes a poor approximation to my surface

The "Simplify Mesh" option can only use the samples that you give it. In almost all cases, you'll want to bump up the sample resolution in both X and Y directions, when you turn Simply Mesh ON. This gives the mesh simplifier more vertices to work with, and a better approximation to your surface is the result.

Getting more help

Make sure you register your copy of SuperMesh, so you can receive technical support. Technical support is available directly from MetaCreations.

If you're stuck, a good place to start is Fractal Design's Ray Dream World Wide Web site at:

http://www.fractal.com

Fractal Design has been purchased by MetaCreations. The MetaCreations website is at:

http://www.metacreations.com

To send comments to the authors of SuperMesh, please see the Zenstar Software Web site at:

http://www.zenstar.com

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Version

This manual describes version 2.0.6 of the SuperMesh extension. If you have a later version of SuperMesh, you might need to get an updated version of this manual.