

# Painter 3D Extensions for Ray Dream



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# Getting Started

Welcome to the Painter 3D Extensions for Ray Dream. These Extensions act as conduit that "transports" object geometry and shaders (maps) between Ray Dream Studio or Ray Dream 3D and Painter 3D. Once in Painter 3D, you can edit the surface maps using many cool Natural Media painting tools and effects, and then easily reapply the new maps to the original model object in Ray Dream. Using the Extensions gives you tighter integration and an easier workflow between your 3D modeling and 3D painting because it eliminates the need to actively save or import files between the two applications. Updates you make in one application are reflected in the other. Extensions are also provided for Saving and Exporting in Painter 3D's native file format (.P3D) as well as updated extensions for Detailer's native format (.VDU).

**Important:** The Painter 3D Extensions Require Ray Dream Studio 5.0.2 or later, or Ray Dream 3D 1.0.2 or later you do not have Ray Dream Studio 5.0.2 or later, or Ray Dream 3D 1.0.2 or later, you can use the updaters that are included with Painter 3D in the Ray Dream Users directory. You must use the updaters BEFORE installing the Painter 3D Extensions or you may run into errors and have to reinstall Ray Dream Studio or Ray Dream 3D.

## Installation

To install the Painter 3D Extensions for Ray Dream, use the Painter 3D installer (setup.exe) and choose Custom installation. Choose the Ray Dream Extensions option and locate your Ray Dream directory if prompted.

The installer will put the following files in your RayDream Extensions directory:

	Cvoodoo.DTA	Detailer 1 save/export
	Cvoodoo.RDX	Detailer 1 save/export
Painter3D/	cDetMod.DTA	Painter 3D for transfer
Painter3D/	cDetMod.RDX	Painter 3D for transfer
Painter3D/	CP3D.DTA	Painter 3D save/export
Painter3D/	CP3D.RDX	Painter 3D save/export

To uninstall, you can simply delete these files and restart Ray Dream.

# Transporting an Object

The process of transporting objects from Ray Dream to Painter 3D is:

1. Prepare the object in Ray Dream.
2. Pass the model and shader to Painter 3D.
3. Edit the surface map in Painter 3D.
4. Save the edited map in Painter 3D.
5. Reload the edited map as a shader in Ray Dream.

## Preparing the Object

Before you can transport an object from Ray Dream to Painter 3D you'll need to perform the following steps:

- Assign the a mapping mode to the object
- Assign a shader to the object (optional)
- View the map and object before transporting

**Note:** You can only transport geometry objects from Ray Dream to Painter 3D. You cannot transport cameras, lights, or other non-geometry objects.

## Assign a Mapping Mode

You can assign implicit mapping to an object by completing the following steps:

1. Select the object
2. Click the Mapping Mode tab on the Properties palette
3. Choose Parametric as the mapping mode.

## Assign a Shader (Optional)

- With the object selected, assign a shader. Refer to your Ray Dream Studio User Guide for complete instructions.

The following map types are supported between the two applications:

<b>Painter 3D</b>	<b>Ray Dream</b>
Texture	Color
Bump	Bump
Highlight	Highlight
Reflection	Reflection
Glow	Glow

## View the Map and Object

- Ray Dream, click the Shaded Preview Mode button. In this preview mode you'll be able to see how the shading appears on the object.

Your object is now ready for transport and you can proceed with painting.

## Painting an Object



Before painting, make sure you assigned Parametric mapping mode and a Texture Map shader (if desired) to your object. See [Transporting an Object](#) for more details. Once your object is prepared, access the Extensions from the Windows menu> MetaCreations Painter 3D in Ray Dream.



### To paint your object:

1. Select the object you want to paint, then press the Paint Object button.
  - The selected object and any attached shaders are sent to Painter 3D. If Painter 3D is already running, the model and shader files automatically load and Painter 3D becomes the active application.
  - If Painter 3D isn't running, it launches, then loads the model and shader files.
  - If the Painter 3D Extension can't launch Painter 3D, a warning appears asking you to make sure the file type P3D is properly registered.

The model appears in Painter 3D's Model window. The current Texture Map shaders files load as the surface maps for the appropriate map types (that is, Texture, Bump, and so on).

If you didn't assign any shaders in Ray Dream, you can apply a new texture map in Painter 3D.

2. Begin painting your object in Painter 3D. You can paint directly on the object in the Model window, or on a 2D representation of the surface map in the Image window. See the Painter 3D documentation for details on using Painter 3D's Natural-Media tools and effects to paint your object.
3. When you're through painting in Painter 3D, save the bitmap image by selecting the image and choosing File menu> Save.

You can save the model from within Painter 3D in P3D format, which also saves the bitmap image. However, the model is only used for reference by Painter 3D for painting. Saving the model does not affect the original model geometry in Ray Dream.

4. Close the model in Painter 3D to automatically reload images, or click the Reload button in Ray Dream to see your changes and update the model. Refer to [Reloading Your Shaders](#) for more information about reloading changes.

**Important:** If you intend to further modify the model in Ray Dream and want to continue painting it in Painter 3D, first close the model in Painter 3D before selecting the Paint Object button from the Painter 3D Extensions. This also closes the shader.

**Note:** If you didn't assign a shader to an object and you let the Painter 3D Extensions create one for you, load the shaders into the Current Shader Editor to see the effect in the Working window. See the **Note** section in [Reloading Your Shaders](#).

**Note:** Any new maps you added in Painter 3D are added on top of the current Ray Dream shading. Your new maps will not replace the existing shading.

## Painting Multiple Objects

You can transport multiple objects simultaneously between Ray Dream and Painter 3D. There are some limits you should know about before attempting a transport.

- All the channels in a single object must have the same mapping mode. Different objects can have different mapping modes. You can check mapping modes by using the Ray Dream mode preferences in the Preferences dialog. The dialog is accessed by using Edit menu> Preferences.
- When selecting multiple objects, all the objects must be geometric objects, have valid mapping coordinates, any non-geometric objects (lights, cameras, etc.) will be ignored.
- If you've chosen a lossy bitmap file format (a JPG, for example), a slight decrease in quality will occur when saving the texture map in Painter 3D. This is due to the nature of the compression scheme with lossy formats.

### To paint multiple objects:

1. In Ray Dream, select several geometry-based objects either by Ctrl/Command-clicking the objects or by dragging a marquee around the objects.
2. Group the selected object (Ctrl/Command-G).
3. If you're working with a hierarchy of objects (objects with parent-child relationships), they will be maintained when you transfer them to Painter 3D.
4. Click the Paint Object button. Painter 3D becomes the active application.
5. Begin painting your objects in Painter 3D. You can paint directly on an object in the Model window, or on a 2D representation of the surface map in the Image window. See the Painter 3D documentation for details on using Painter 3D's cool Natural-Media tools and effects to paint your object.
6. When you're through painting in Painter 3D, save the bitmap images by selecting an image and choosing File menu> Save. The graphic file formats supported by both applications are RIF, JPG, TIF, and BMP (windows) PICT (mac).
7. Click the Reload button to see your changes and update the model in Ray Dream. Refer to [Reloading Your Shaders](#) for more information about reloading changes.

## Reloading Your Shaders



Reload

Once you've edited and saved a shader in Painter 3D, you can use the Reload button to update it on the 3D object in Ray Dream.

**Important:** You can continue to reload the same bitmap after repeated editing in Painter 3D. However, if you modify the model in Ray Dream and want to further paint it in Painter 3D, first close the model in Painter 3D before selecting the Paint Object button from the Painter 3D Extensions. This closes the bitmap shader and allows Painter 3D to reopen it. (Painter 3D cannot reload a model of the same name.)

**Note:** If the shaders do not show on the object in the Working window after pressing the Reload button, load them in the Current Shader Editor.

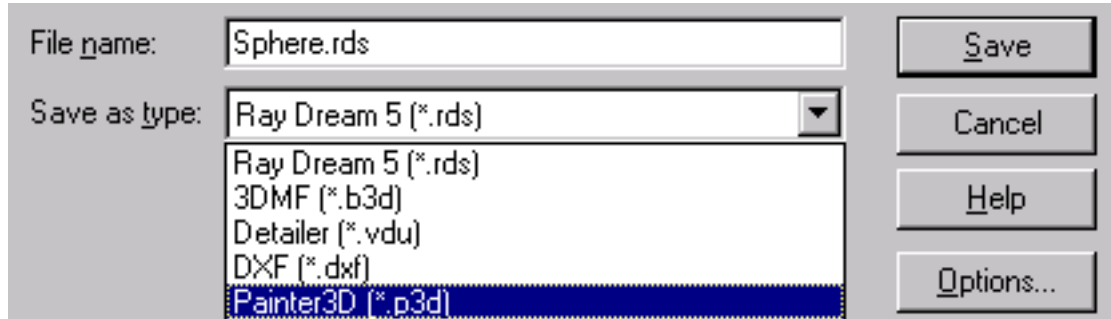
### To load shaders in the Current Shader Editor:

1. Click the channel tab for the texture map you want to load. For example, if you're loading a Bump map, click the Bump channel.
2. Choose Insert menu> Texture Map. The Open dialog appears.
3. Locate the shader you edited in Painter 3D.
4. Click Open to replace the shader in the active channel.

The maps are loaded onto the 3D object. Proceed to [Preference Settings](#).

## Exporting and Saving Painter 3D Files

You can save or export your objects in Painter 3D's native file format (P3D) directly from Ray Dream. Selecting Save or Export from the Ray Dream File menu, the Save File dialog displaying the most recently used directory appears.



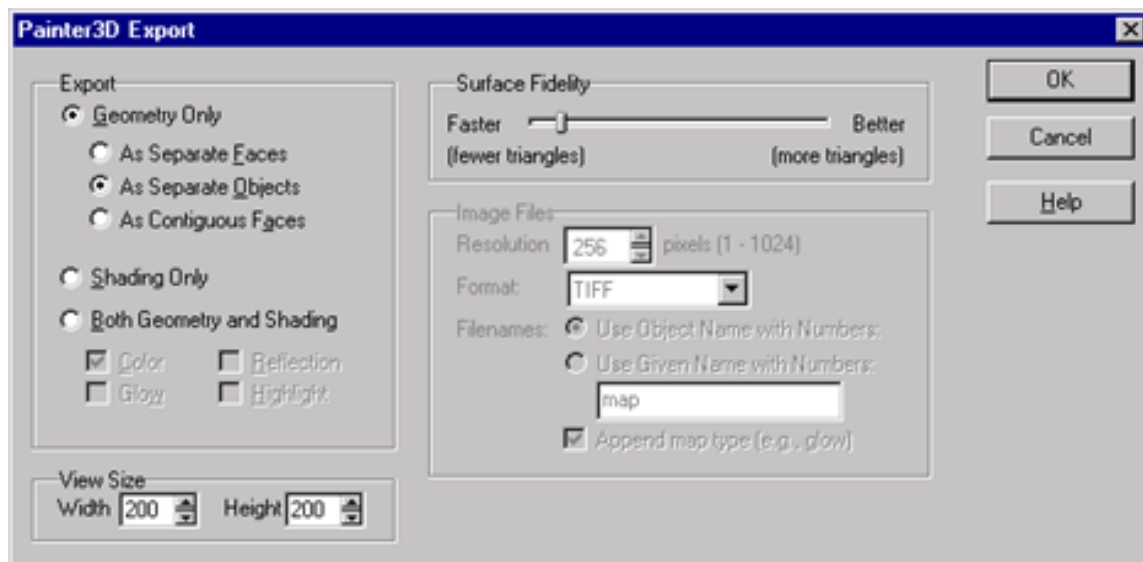
You can choose a file type from the Save as Type menu.

Exporting your files from 3D from Ray Dream is useful if:

- You want to paint the models at another time
- You want to paint the models on a different computer system
- You don't have enough RAM to run both applications simultaneously

**Note:** The Painter 3D Extensions might not bring the P3D model into Painter 3D in the same orientation and scale that it had in Ray Dream. Use the Virtual Trackball and Magnifier tools in Painter 3D to adjust the model for painting.

You can choose to export all the texture maps or only specific ones. See [Preference Settings](#) for more information on this and other export options.

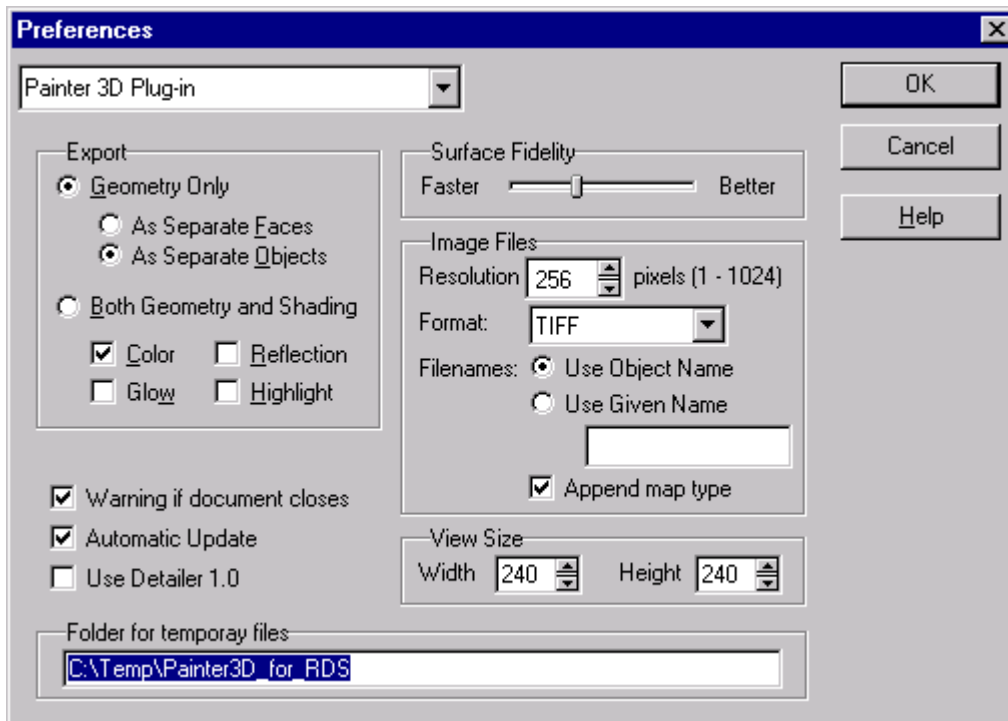




## Preference Settings

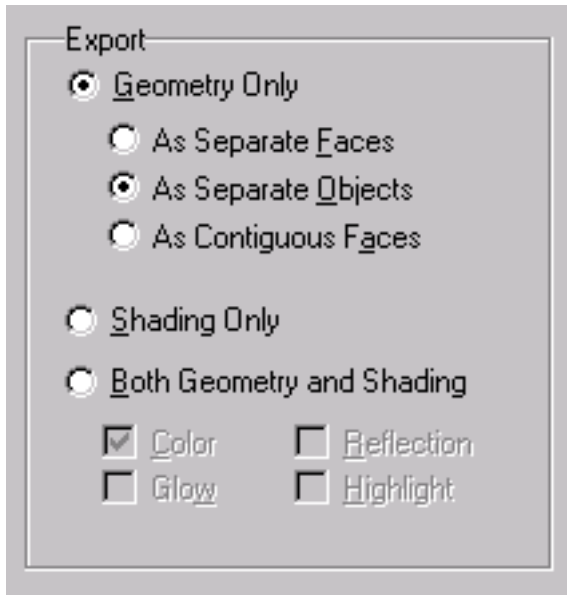
The pop-up menu in the Ray Dream Preferences dialog lets you access your Painter 3D Plug-in preference settings. There are five types of preferences to set:

- Export
- Surface Fidelity
- Image Files
- Folder for temporary files
- View Size



## Export Preferences

Export preferences let you control how a model is exported.



### Geometry Only

When this setting is enabled, only the shape of the model is exported. Any shaders attached to the model are not exported.

There are three options you can set for this setting:

#### As Separate Faces

When this option is enabled, an object is created for each face in your model

#### As Separate Objects

This is the default option. When enabled, each object in the model is exported separately.

#### As Contiguous Faces

When this option is enabled, all the faces of the model are separated and placed next to each other in the 2D map mesh view. The geometry produced is like unraveling the model and spreading it out on a flat surface.

### Shading Only

When this setting is enabled, an image map is generated for each channel, in the model, that contains a Texture Map. If there is no texture map in the channel, no image is created.

### Both Geometry and Shading

This setting exports both the geometry of the model and produces images for any shader attached to the model. The four checkboxes let you choose which channels are exported from Ray Dream. You can choose to export the texture maps from the Color, Glow, Reflection and Highlight channels. If a selected channel does not have a texture map assigned to, no image is generated.

The usual way exporting a model is to not check any of the shading options and create the all the channel maps in Painter 3D. You can choose to export a particular channel's image if you

want to use one of the original images as a reference for the maps you're going to create in Painter 3D

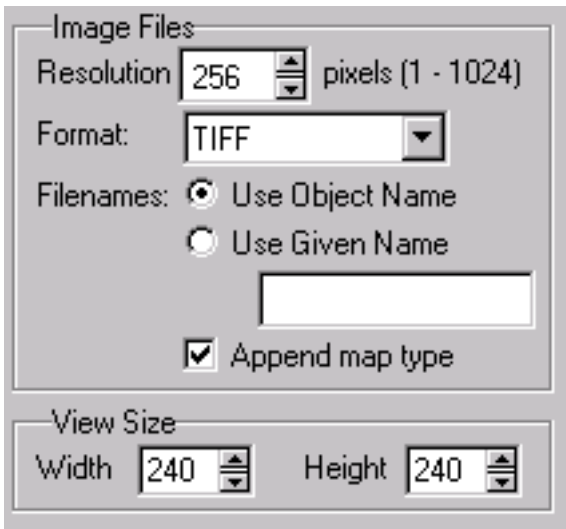
## Surface Fidelity

This setting controls the quality of your model's surface when it's transported to Painter 3D. This setting has no effect on the model in Ray Dream. The higher the setting the more triangles are added to the model's geometry, making the surface appear smoother. This setting is more useful when you're exporting or saving models for use in other applications, since the smoother surface quality is only temporary in Painter 3D.



## Image Files

These preferences control the size and resolution of the image files produced when you transport a model with shaders to Painter 3D.



There are three preferences you can set:

### Resolution

This preference sets the size of your image in pixels. The image is always square so the Width and Height resolution are the same.

### Format

This preference sets the file format of the image. TIFF, RIF, JPG and BMP (windows) or PICT (mac) are supported.

### FileNames

This preference lets you control the name of the images created. If you enable Use Object Name, the images will all contain the name of the original Ray Dream object. If you enable Use Given Name, you can set a unique name.

If you enable the Append map type option, the type of map the image will be used for is added to the file name. For example, if an image is produced from the Glow channel, “\_(glow)” is added to the file name.

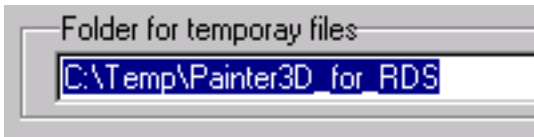
## View Size

This is the size of the 3D View in Painter 3D.



**Important:** The larger the size, the more memory Painter 3D requires to display the object. In Painter 3D, choose Window menu>Set 3D View Size for RAM estimates of different view sizes.

## Specifying Temporary Folder:



When the Painter 3D Extensions transports objects from Ray Dream to Painter 3D, it converts the model from Ray Dream to a temporary file in Painter 3D's native P3D format and it passes the name and location of the assigned shaders to Painter 3D. These P3D and bitmap files are saved to a Temporary Folder that you can specify. By default, this directory is set to Painter3D\_for\_RDS in your System's temporary path.

To change the directory from the default, enter the complete path to a different directory.

**Important:** Because maps are constantly written to these temporary directories, it's a good idea to periodically delete unneeded texture files to free up disk space. Models are automatically deleted when not in use.

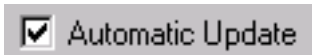
## Specifying Warnings

When this preference is enabled, Ray Dream reminds you when you close a file that your model is still being edited in Painter 3D.



## Automatically Updating Models in Ray Dream

When this preference is enabled, Ray Dream automatically reloads the shaders when you close your model in Painter 3D. (This option only works when you're using Painter 3D not Detailer)



## Using Detailer 1 with the Painter 3D Extensions

When this preference is enabled, Detailer will be used to paint your model instead of Painter 3D. Files are saved using the Detailer's native format (.VDU).



## Credits

The Painter 3D Extensions for Ray Dream team:

<b>Lead Software Engineer:</b>	Thierry Buffenoir
<b>Product Management:</b>	Jerry Granucci
<b>Quality Assurance:</b>	Curt Hironaka, Randy Hollingsworth, Steve Rathmann and Stanley Veale
<b>Documentation:</b>	Erick Vera and Jerry Granucci
<b>Installer:</b>	Pascal Belloncle
<b>With help from:</b>	Damien Saint-Macary and Greg Mitchell

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