



MARI
QUICK START GUIDE
VERSION 1.4V2

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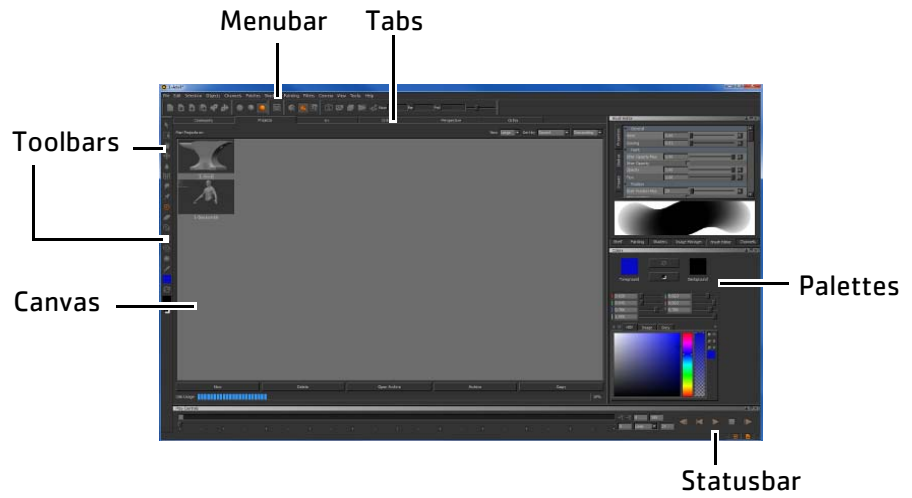
1 WHAT'S THIS GUIDE ABOUT?

This guide gives you a very quick introduction to Mari. It doesn't go into great detail, and assumes you're already familiar with CG painting software. Read this if you have twenty minutes to figure out what it's all about before you start painting assets.

If you have more time and want to learn how to use Mari more effectively, check out the *Mari Getting Started Guide* and *Mari User Guide*. Get these from the **Help** menu.

2 THE MARI WORKSPACE

Here is an illustration of the Mari workspace that displays when you first open the program.




Workspace	
Menubar	To select Mari commands (many of which are also available using shortcut keys and/or icons).
Toolbars	To click icons for common Mari functions or settings.
Canvas	Where you view and paint your geometry.
Tabs	To switch between views.
Palettes	Controls for viewing and changing different aspects of what's on the canvas.
Statusbar	Information about the project generally, progress of long operations (such as baking), and icons.

3 MANAGING PROJECTS

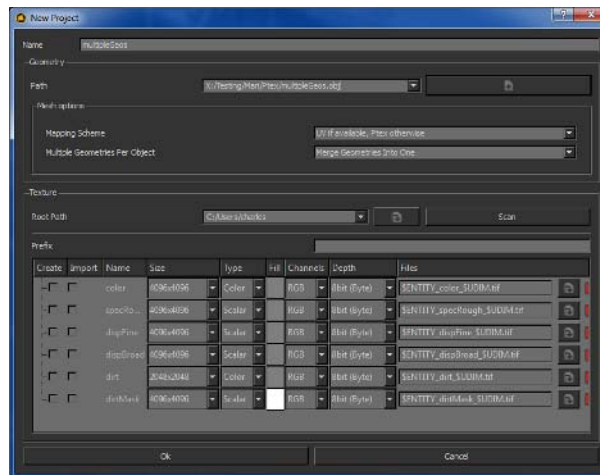
A Mari project stores your work on geometries and associated textures. Mari's Project tab holds all the projects you are working on.


Creating a new project

1. Do one of the following:

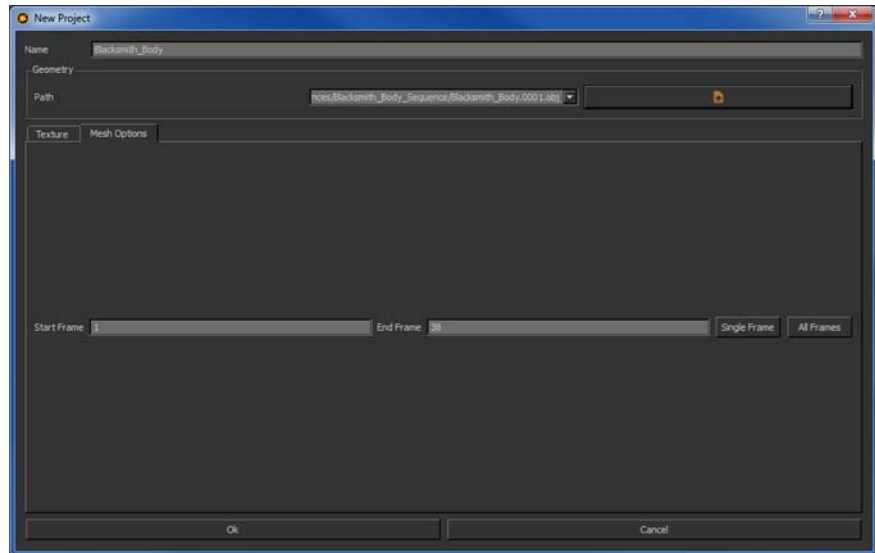
Select from menubar	or click on toolbar	or click on the Project tab	or type shortcut key
File > New		New	Ctrl+N

The New Project dialog box displays.



2. Set the project's **Name** (for you to identify it only — this is not a filename).
3. Select the geometry file for the project in the **Path** field. The drop-down lists the last 10 files selected, or you can click  to browse to a file.

- If you are loading an animated sequence, the **Mesh Options** tab displays.



Specify the range of animation frames to import.

- On the **Texture** tab, click to select which of the channels in the list to create. You can select a different **Category** from the list – the set of channels updates with channels for your selected category.
 Click boxes under **Create** and **Import** to set the options. You can right-click to get a pop-up menu allowing you to easily create or import all the channels.

Tip Click **Scan** to make Mari scan the project's root path for any existing textures. If any textures exist for your channels, Mari shows a green dot next to the channel. You can select to import these textures.

As with the project name, the channel **Name** is for you to identify it only — when you export you can select a different name.

For the **Type**, choose **Color** for anything color-dependent (and Mari will apply the viewer LUT automatically), or **Scalar** for a mask or displacement.

If you select a different **Depth** or resolution, file sizes can vary dramatically (for example, a 2K RGB "Byte" texture file is 2MB — whereas a 4K "Float" is 172MB).

- Click **OK**.
Mari checks the model for any errors that might prevent it from processing, for example whether UVs overlap or touch border edges. A "Mesh Sanity Check" dialog displays any warnings or errors. (Errors cancel opening the model, but you can continue with warnings.)
- Click to **Continue**.

Mari renders your selection and displays it on the canvas.


Tip *Depending on the size and complexity of textures, it can take several minutes the first time you load them into a Mari project. Once saved, however, the project should open quickly in future.*

Opening existing projects

1. Click on the **Projects** tab.
This shows all the projects you have on your computer.
2. Double-click on the project to open.

Saving your project

Do one of the following:

Select from menubar	or click on toolbar	or type shortcut key
File > Save		Ctrl+S


- Tip**
- *Save your project often!*
 - *Note that while your textures remain cached locally, saving does not export them, so export often too!*
 - *If you don't need to save (no changes since the last save), the toolbar icon is gray.*

4 CHANNELS

Channels hold “layers” of paint in your project. For example, a project might have channels for diffuse color, displacement, specular, or mask details.

Adding a channel to a project

1. Do one of the following:

Select from menubar	<i>or click</i>	<i>or right-click on the Channels palette and select</i>
Channels > Add Channel		Add Channel

*The **Add Channel** dialog box displays, allowing you to set the options for the new channel.*

2. Select a name, color channels, depth, type and base color for the channel (as with a new project), and click **Ok**.

*The new channel displays in the **Channels** palette.*

Tip *If there are multiple objects in your project, there is no **Ok** button in the **Add Channel** dialog. Instead, you need to choose whether you want to import the channel onto the current object only or **All Objects**.*

Adding a set of channels

1. Do one of the following:

Select from menubar	<i>or click</i>	<i>or right-click on the Channels palette and select</i>
Channels > Channel Presets		Channel Presets

*The **Add Multiple Channels** dialog box displays.*

2. Select the type of object you're creating from the **Category** list.
The list of channels at the bottom of the dialog box expands to show all the channels for that kind of model. Select the channels to create.
3. If you have existing textures to import into the new channels, set the **Root Path** and make sure that the **Files** for each channel show the correct texture files.
4. Click **OK** to create and import the new channels.

Tip *To toggle quickly between the last two selected channels (while in the painting canvas), press **T**.*

*For other options, such as duplicating, locking or resizing a channel, right-click in the **Channels** palette.*

When you Import channels, if there is a corresponding texture for each patch in the model, an indicator (red, green, or number) tells you whether your selection includes a complete set of textures.

5 CONFIGURING YOUR WORKSPACE

The Mari workspace is completely configurable. As detailed on the pages that follow, you can customize how palettes display, your own personalized sets of brushes and colors, and shortcut keys.


Palettes

Mari uses a number of palettes — windows that you can move around your workspace, with specific information and tools for working on your project. For example, the **Channels** palette shows all the channels in the project, and has controls for editing the channels.

To open palettes:

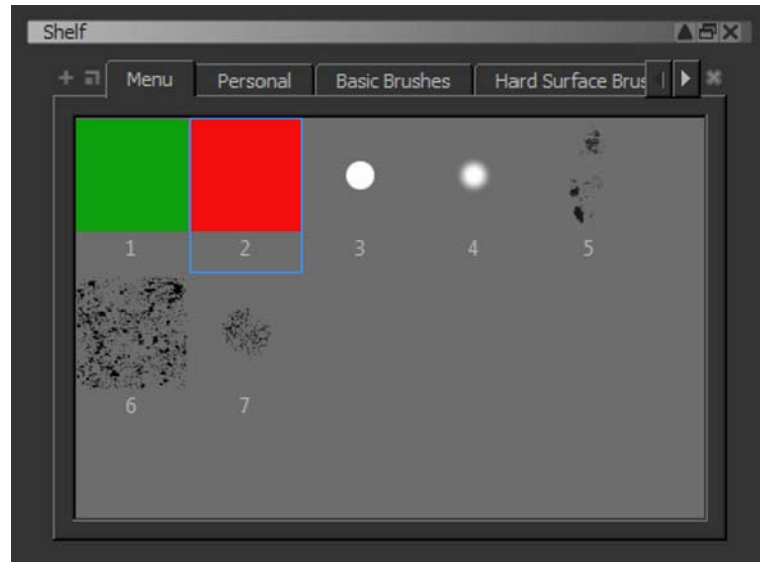
Select from menubar	<i>or</i> right-click on the menubar or toolbar and select
View > Palettes > <palette name>	<palette name>

To move, size and arrange palettes:

To...	Do this...
Undock and move a palette	Grab and drag it by its title bar to anywhere on your screen. (Or click  to undock, and then drag by its title bar).
Dock a palette to the window	Move it to one of the edges of the Mari window. <i>A dotted line displays along the edge where it can dock.</i>
Dock a palette to another palette	Move it over another undocked palette. <i>A dotted line displays where it can dock.</i>
Size a docked palette	Grab and drag the dotted bar along the bottom or side.
Size a floating palette	Drag an edge or corner.
Stack palettes	Drag and drop them directly on top of one another. Tabs appear for selecting which of the stacked palettes to display.

Shelves

The **Shelf** palette lets you store customized “shelves” of brushes, colors, and images. You can also share them with others.



Mari has the following kinds of shelves:

- The **Menu** shelf stores seven items available from the F9 onscreen pop-up menu. These items must be numbered from 1-7 to appear.
- The **Personal** shelf stores items you select and configure for all projects.
- The **Basic Brushes** shelf stores a set of predefined basic brushes.
- The **Hard Surface Brushes** shelf stores a set of predefined hard surface brushes.
- The **Organic Brushes** shelf stores a set of predefined organic brushes.
- Customized shelves you create store items you select and configure for all projects.

Customizing shelves

To add an item (brush, color, or image) to a shelf, drag it onto the shelf.

6 CHANGING THE VIEW

As described below, Mari includes features for 3D navigation to view your model from various angles and perspectives, change the lighting on the mesh, and change the resolution of textures.

3D navigation

You can move the view by holding down **Alt**.

To...	hold down Alt and
Zoom in and out	Ctrl-click and drag OR Right-click and drag
Pan left and right	Shift-click and drag OR Middle-click and drag
Rotate the model	Left-click and drag

Tip *By default, Mari uses momentum when you are moving the view. When you let go of the mouse button, the model slowly coasts to a stop. You can turn this behavior off so that the model only moves when you are holding the mouse button down. To do so, right-click on the canvas, select **Display Properties** and uncheck **Momentum Enabled** under **Navigation**.*

You can also use the keys 1-6 to switch between preset views (left, right, top, bottom, front, and back).

Press **Home** to cycle between hiding all palettes, hiding docked palettes and showing hidden palettes.

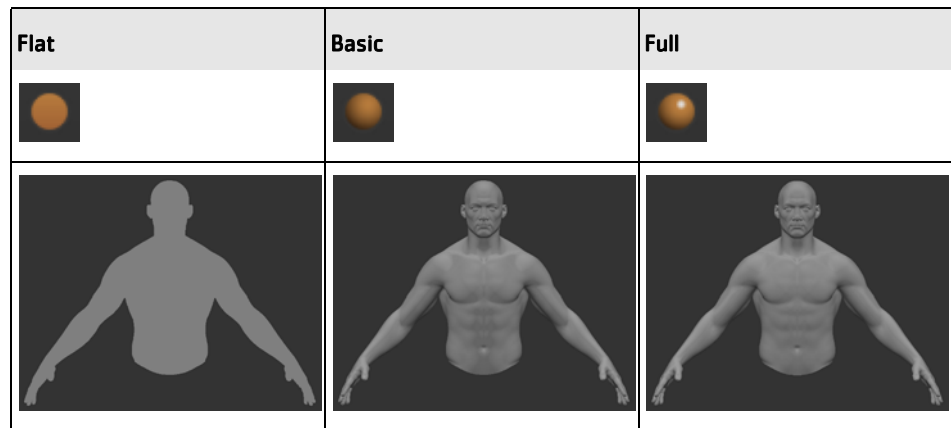
Use the tabs at the top of the canvas to switch between:


- **Uv** - a grid view showing the UV patches,
- **Ortho/Uv** - a split screen showing the UV patches and the orthographic view,
- **Perspective** - a perspective camera view, or
- **Ortho** - an orthographic camera view.

Tip *You can also use the , , and  toolbar buttons or the **F10**, **F11**, and **F12** keyboard shortcuts to activate a particular view on any tab.*



Lighting

You can change the lighting on the main mesh by clicking on the toolbar:



Mari has four custom lights, which appear on the drawing canvas .

You can set the light details in the **Lights** palette. Mari uses these in the **Basic** and **Full** lighting modes:

- To turn a light on or off, click on the  icon in the list, or use the **General > On** checkbox.
- To change a light, click on it in the **Lights** list, and then set the color and strength.
- Select whether the light is fixed to the **Scene** or **Camera**.
- To move a light around, select the **Pan Object** tool , then click and drag the light around on the canvas.
















7 PAINTING

Painting in Mari is similar to other standard paint programs. Paint using the various tools, then bake it onto your model. Most tools work on unbaked paint, but one or two work directly on the baked paint on the surface.


Tip *Each tool has a set of keys that control how it works. By default, the option keys for the current tool are shown on screen at the top of the canvas.*

To select a tool:

Choose from your shelves or the **Tools** toolbar:

Paint tools			
 Select	 Marquee select	 Transform paint buffer	 Zoom paint buffer
 Pan object	 Blur	 Warp	 Slerp
 Pinup	 Paint	 Erase	 Paint through
 Paint gradient	 Clonestamp	 Towbrush	 Color picker/ Pixel analyzer

Painting a constant color

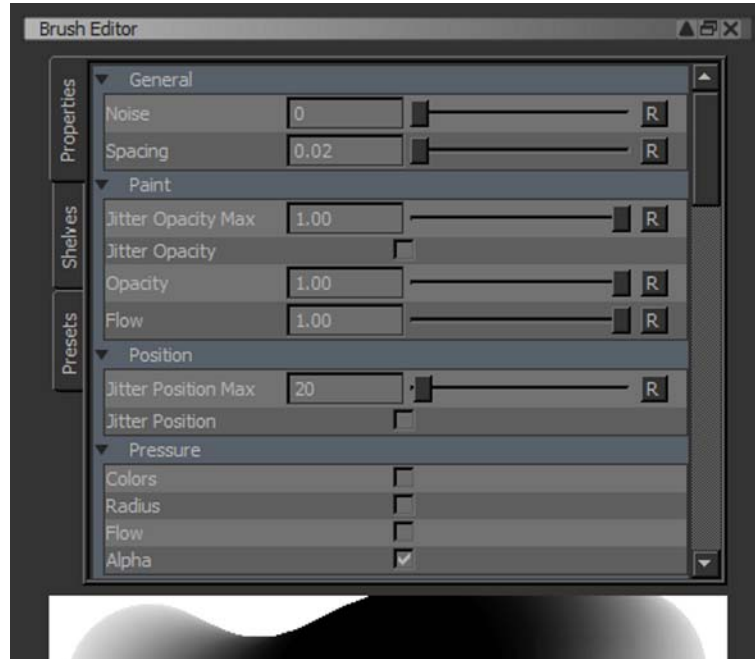
1. Click 
2. Click and drag to paint on the model.

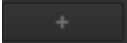
Tip *You can paint a straight line by:*

- *clicking one end point, moving the cursor, pressing **Shift** and clicking the second endpoint*
- *pressing **Shift** and holding down the mouse button while moving horizontally or vertically.*



Customizing you brush

1. Open the **Brush Editor** palette.
*The **Brush Editor** displays.*




- Tip**
- *Resize the brush editor palette to minimize scrolling.*
 - *There are many options for customizing your brush, including setting values for **Paint**, **Pressure**, **Radius**, **Rotation**, **Bitmaps** to use, **Geometry** and **Noise**.*
 - *You can test the brush in the scratch pad at the bottom of the palette.*
2. You can select a brush to modify from those available in your **Shelves**.
 3. When you have finished creating a brush, click  to add it to the selected shelf.

“Painting through” an image

1. Open the **Image Manager** palette.
2. To load an image, click , navigate to and select the image file, and click **Open**.
A thumbnail of the image displays, along with information about the selected image.
3. In the **Tools** palette, click  (the **Paint Through** tool).
4. Drag and drop the image from the **Image Manager** to the canvas.


5. Adjust the image size and position:

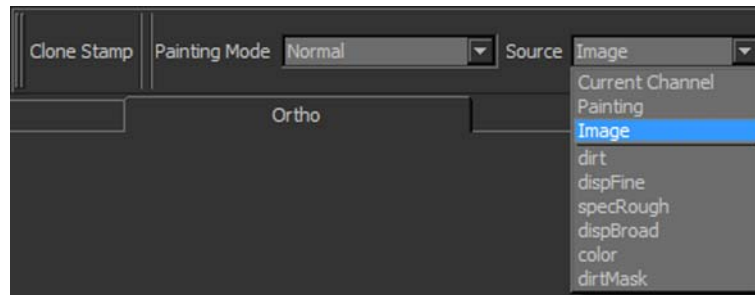
To...	Do this...
Resize	Grab and drag its edges or corners, or press Ctrl+Shift then click and drag.
Move	Grab the "handle" in the center of the image (or press Shift and click anywhere on the image), and drag.
Rotate	Click and drag outside the image, or press Ctrl and drag inside the image. Press Shift when dragging outside the image to rotate in increments.
Crop	Double-click the image in the Image Manager , drag the area you want to crop, and click  .
Change the opacity	In the Tool Properties palette, select Texture > Preview , and change the Preview Alpha (enter a number or drag the slider). Pre-multiply alpha if your image has transparency.
Reset the image	In the Tool Properties palette, select Texture > Transform > Reset .

6. Paint!

- Tip**
- *You can quickly switch between the **Paint** and **Paint Through** tools by pressing **P** and **U**.*
 - *To hide the image, hold the **?** Key.*
 - *To paint the whole image onto the model in one step, press the **'** (apostrophe) key.*
 - *To toggle repeating the image, so you can paint past the edge of the floating image and have the paint continue, press the **;** (semicolon) key.*

Clone stamping

1. Click .
2. Use the **Source** menu on the toolbar to select where to take the clone source from.



3. Hold down the **Ctrl** key and click to select the clone source point.


Tip *When cloning from a channel, you can clone directly from the surface. In this mode, the tool clones the paint from the channel surface straight up into the paint buffer directly above that point. This lets you copy the model's surface into the paint buffer so you can edit it and then re-bake.*

*To use this mode, hold down **Ctrl+Meta** (or **Windows** key) when you click to set the origin point.*

4. Paint to stamp your selection onto the model.




Moving and warping paint

To move paint on the model before baking:

1. Click .
2. Left-click anywhere on the paint buffer and drag to move the painting around on the model.
3. **Ctrl**+left click and drag to rotate the painting, or left-click and drag outside the paint buffer.
4. **Ctrl+Shift**+left-click and drag to resize the painting, or grab the corners of the paint buffer and drag.

Tip *The paint buffer is visible on screen as a white box, but it may be larger than the view window and not visible. It will become obvious if you move or resize the painting. To reset the paint buffer to its default values click the **Reset** button in the **Painting** palette under **Paint Buffer > Transform**.*

To warp paint before baking:

Using this tool...	You can...
 Warp	Shift -click and drag to create a warp grid. Click and drag the points around to warp the paint. To increase or decrease the grid resolution, press the up or down arrow keys.
 Slerp	Use the Slerp Mode menu on the toolbar to set the mode (from Pull , Grow , Shrink , or Rotate). Click and drag to apply your effect. Erase distortion by selecting the Erase mode.
 Pinup	Shift -click to set "pins". Then click and drag to move the pins. You can use pins to protect parts of the paint that you don't want affected by the distortion.


Baking paint onto the model

1. Make sure all patches you want to bake are selected.
2. Do one of the following:

Type shortcut key	or click on statusbar
B	

Tip *Whenever you change your view of the model, it bakes automatically. You can change this setting in the **Projection** palette if required.*

Blurring baked paint

1. Click .
2. Left-click and drag to blur paint baked on the surface.

Tip

- *As with the paint tools, you can edit the blur brush tip.*
- *When you have finished blurring the paint, you need to bake.*

8 SHADERS


Shaders control how Mari displays the model on the canvas. Mari's default shader shows the color from the current channel. You can build your own custom shaders by combining shader modules. Each module controls a single display effect. The modules you can use include:

- Combining two diffuse channels
- Showing a channel as a displacement map
- Using a channel as a luminosity map
- Combining channels using a third channel as a mask.

So you can build a shader that takes the details from multiple channels in your project to render the canvas on screen.

Tip *Shaders do not affect the contents of the channels, only how Mari displays the model on the canvas. For example, if you have a shader that combines two diffuse channels, the model on screen is displayed with a mixture of both channels. However, the channels are still separate and contain different data.*

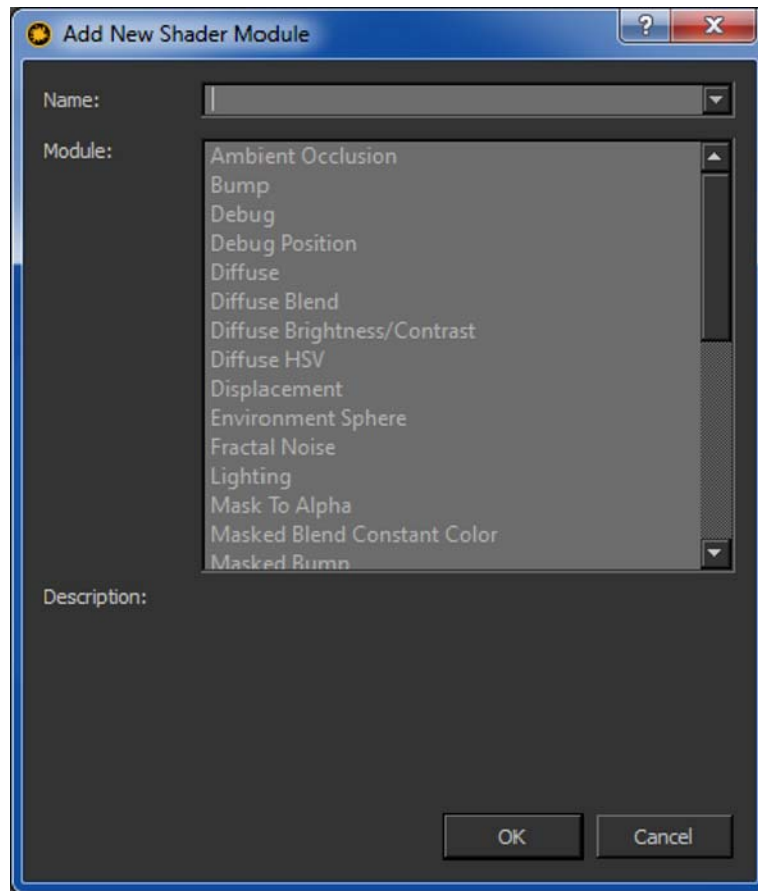
To create a custom shader:

1. In the **Shaders** palette, right-click and select **Add SurfaceShader** or click .

The new shader appears in the list, with details at the bottom of the palette.

2. New shaders start as a copy of the default shader. You can:
 - Edit the existing modules.
 - Click the **Add New Shader Module** button to add modules to your shader.

The **Add New Shader Module** dialog appears.



Enter a name and select the **Module** to add. For example, to create a shader that shows one channel as a displacement map, select the **Bump** module.

3. Set the details of the shader modules.

Each module has different details. Adjust the values until you get something you like.

You can add as many modules as you need to build up your shader.

Tip *If you build a shader that takes data from multiple channels, it can be hard to remember which channel you're currently editing. In this case, you can switch back to the default shader, which just shows the contents of the current channel.*


For full details of the shader modules available, see the Mari User Guide.

9 EXPORTING AND IMPORTING

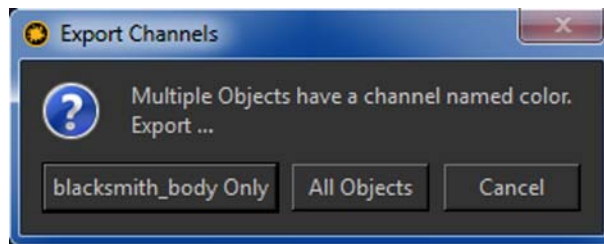
Exporting

To export a channel:

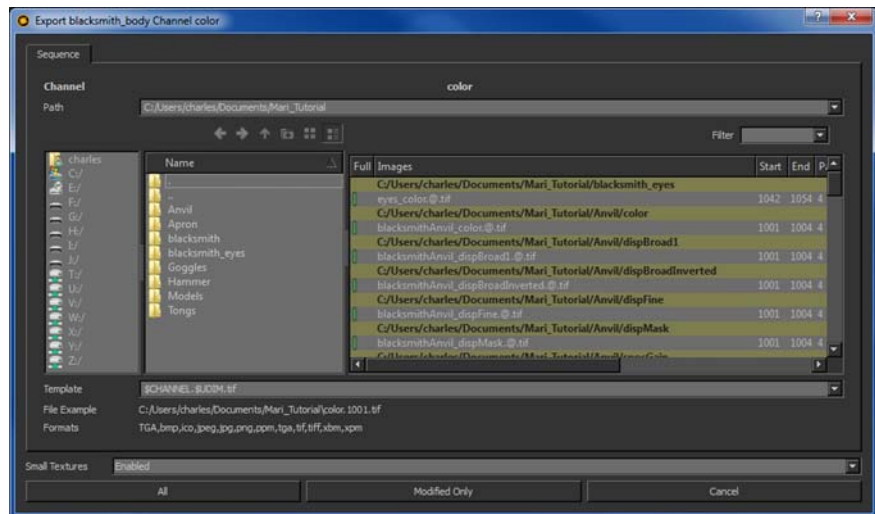
1. Manually select patches to export (if you don't select any, Mari exports all patches).
2. Do one of the following:

Select from menubar Channels > Export	<i>or</i> click on toolbar 	<i>or</i> right-click in Channels palette and select Export
---	--	--

If other objects in your project have the same channel name, Mari prompts you to choose whether you want to export the channel for the current object only or all objects.



*Next, the **Export Channel** dialog box displays.*



3. On the **Sequence** tab, enter the **Path** where you want to store the export, or use the browse panes (the two left-hand navigation panes) to browse to it.
4. For the **Template**, either use the default filename template or edit it as required.
5. If you are exporting an animated sequence and want to export only the textures for a particular frame range, enter the range in the **Frame Range** field on the **Mesh Options** tab.
6. Click either **All** (to export all patches on the model) or **Modified Only** (to export only the patches that have been modified since the project was last exported).

If **Small Textures** is enabled, Mari exports any patches that you haven't painted yet as 8x8-pixel textures. When you start to paint on a particular patch, Mari exports it as the correct size.

- Tip**
- *Make sure you check the path and name carefully, especially if you have been swapping between assets — Mari defaults to the last place you've exported. Don't risk overwriting your textures!*
 - *The steps above assume you are exporting a sequence of patches with the udim number (1001, 1002, etc.) in the file names. If you'd rather assign individual files to each patch, you can do so on the **Named Files** tab of the **Export Channel** dialog. Click the buttons on the right to open a file browser and pick a file for each patch. Then, click **All** or **Modified Only** to export the files. Note that by default the **Named Files** tab doesn't appear if you have more than 20 patches in your object. To change this number, you can use the **Patch Cutoff** preference or set the `MARI_NAMEDFILEIMPORT_SEQUENCELIMIT` environment variable to a new value.*

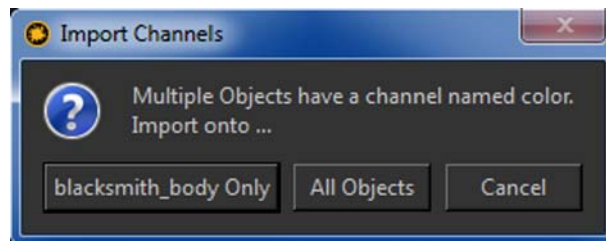
Importing

To import a channel you have exported:

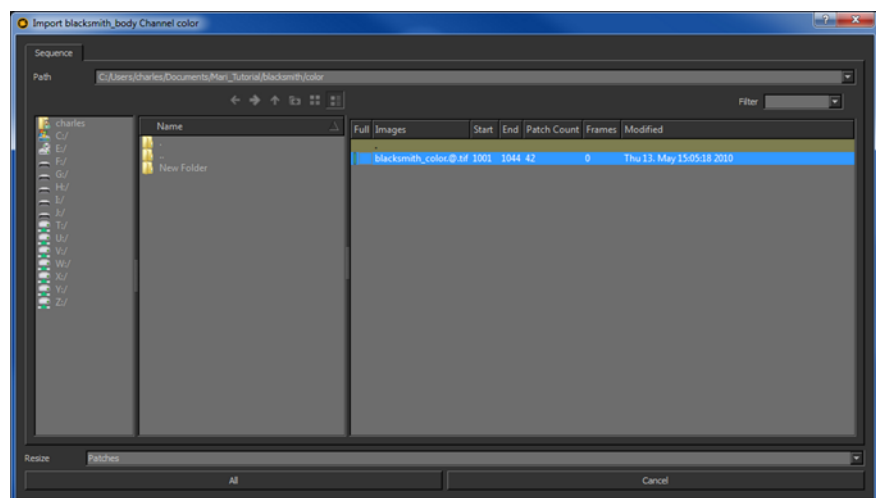
1. If you want to manually select which patches to import, select the patches to import onto.
2. Do one of the following:

Select from menubar	<i>or</i> right-click in Channels palette and select
Channels > Import	Import

If other objects in your project have the same channel name, Mari prompts you to choose whether you want to import the channel onto the current object only or all objects.



*Next, the **Import Channel** dialog box displays:*



3. Enter the **Path** for the files to import, or use the browse panes (the two left-hand navigation panes) to browse to them.

Tip *The steps above assume you are importing a sequence of patches with the udim number (1001, 1002, etc.) in the file names. If you'd rather assign individual files to each patch, you can do so on the **Named Files** tab of the **Import Channel** dialog. Click the buttons on the right to open a file browser and pick a file for each patch. Then, click **All** to import the files. Note that by*

*default the **Named Files** tab doesn't appear if you have more than 20 patches in your object. To change this number, you can use the **Patch Cutoff** preference or set the `MARI_NAMEDFILEIMPORT_SEQUENCELIMIT` environment variable to a new value.*