



s c u l p t r i s

I WELCOMETO SCULPTRIS

Sculptris is an elegant, powerful and yet easy to use 3D sculpting software, allowing the artist in you to simply focus on creating amazing 3D artwork. Gone are the technical and often tedious constraints typically associated with digital art.

If you're new to the world of digital sculpting, Sculptris is the ideal ground on which to get started! If on the other hand you're experienced in CG you will find in Sculptris a blazingly fast way realize your concepts.

It's intuitive, fun and user friendly, so you can focus as an artist on pure creativity.

What's more, the skills you learn with Sculptris directly translate to ZBrush. The models that you create with Sculptris can even be sent to ZBrush with the click of a button using the [GoZ functionality!](#)

Since releasing our award-winning ZBrush more than a decade ago, Pixologic has become recognized for bringing ground-breaking innovations in the world of digital art.

ZBrush is the most widely-used digital sculpting application in today's market and is the industry Standard. When you're ready to take your Sculptris creations to the next level for detailing, rendering and integration into even the largest of projects, we welcome you to [ZBrush](#) with its host of robust, unique and revolutionary tools.

Welcome to Sculptris Alpha 6!

ABOUT SCULPTRIS ALPHA 6

It should be noted that while Sculptris is already highly developed it is still in what's considered to be an alpha (early pre-release) phase. Alpha 6 is a big step toward what will become the final version 1 release of the software but features are still being refined and there can also be errors.

Please let us know of any problems or ideas that you might have for feature enhancements. The place to do that is in the Sculptris Troubleshooting forum at www.ZBrushCentral.com. Thanks!



Sculptris Artist: Damien Canderle

TABLE OF CONTENTS

I	WELCOME TO SCULPTRIS	1
	About Sculptris Alpha 6	2
II	INTRODUCTION TO SCULPT AND PAINT MODES	6
III	NAVIGATION IN SCULPTRIS	9
IV	GENERAL CONTROLS	10
	Size Slider	10
	Size Checkbox	10
	Strength Slider	10
	Strength Checkbox	10
	Airbrush	10
	Lazy	11
	Invert Button	11
	Detail Slider	11
	Options Button	11
	Brush Icon	11
	Material Icon	12
	Paint Button	12
V	SCULPTRIS SCULPT BRUSHES	14
	Crease	14
	Draw	14
	Flatten	14
	Inflate	15
	Pinch	15
	Smooth	15
	Reduce	15
VI	GLOBAL BRUSH TOOLS	17
	Rotate	17
	Scale	17

Grab 18

VII	SCULPTMODE UTILITY CONTROLS	19
	Reduce Selected	19
	Subdivide All.	19
	Mask Brush.	19
	Wireframe	20
	Symmetry Mode	20
VIII	SCENE MANAGEMENT	21
	New Sphere	21
	New Plane	21
	Import	22
	Export	22
	Open	22
	Save	22
	GoZ	23
	How to Install GoZ	23
IX	SCULPTMODE OPTIONS WINDOW	24
	Remember Settings	24
	Recover From Crashes	24
	Background	25
	Fog Backg	25
	Save Image.	26
	GL AA	26
	Brush Spacing	27
	Unify Tool Settings	27
	Size Pressure	27
	Strength Pressure	27
	Compensate Sculpting at Symmetry Line	27
	Beautify/Relax Mesh	27
	Smooth Subdivide	28
	Reduce Strength	28
	Free Camera	28
	Auto-Pivot	28
	FOV	29
	Turntable animation	29

Tablet Navigation	29
Traditional Sculptris Navigation	29
Show Symmetry Line	29
Show Quick Help	29
Export Vertex Normals in OBJ.	30
UV Deformation Mode.	30
Saving the options.	30

X OVERVIEW OF PAINT MODE 31

UV Unwrap Dialog Controls.	32
Resolution.	33
Tight Mapping	33
Validating the UVs creation	33
Paint Brushes and Tools.	33
Paint Color.	34
Paint Bump.	34
Flatten Bump	34
Fill	34
Other Tools & Helpful Info.	35
Tool Adjustments and Other Paint Controls	36
Brush Image	36
Texture Image	36
Color Picker	37
Sampling Surface Color.	38
Heightmask	38
Show advanced tools.	39
Materials	40
Paint Mode Options Window	41
Surface Angle Falloff	41
Combine Color and Bump.	42
Height from: Bumpmap or Geometry	42
Heightmask Depth.	42

XI SCULPTRIS HOTKEYS 43

Traditional Sculptris Navigation	43
Traditional ZBrush Navigation	45

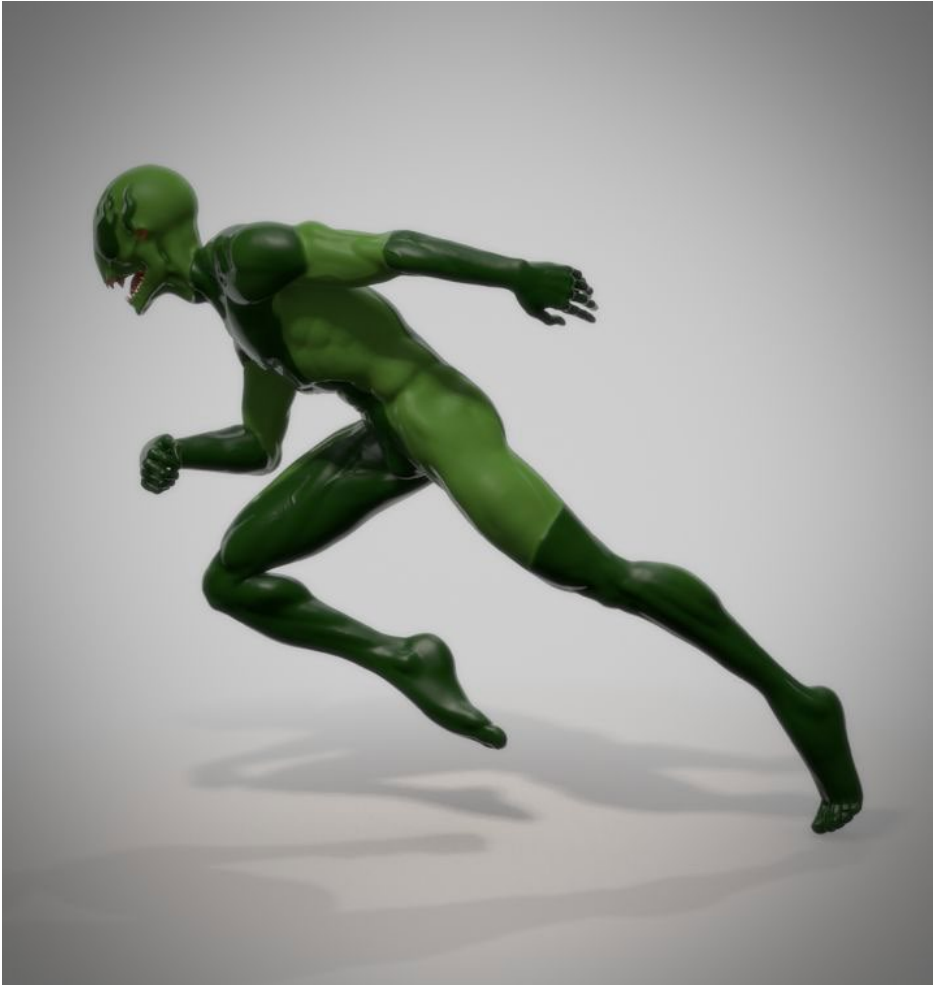
XII NOTES. 47

II INTRODUCTION TO SCULPT AND PAINT MODES

Sculptris operates in two distinct modes: Sculpt and Paint.

In Sculpt mode, you can edit the mesh geometry with simple brush strokes. Think of this like using sculpting tools on a lump of real-world clay. You can even add more clay at any time, increasing the volume of your creation (mesh) where needed.

In Paint mode, you can use brushes to paint a texture that is wrapped (also known as mapped) onto the surface of your mesh. Continuing with the real-world analogy, think of this like painting your sculpture in preparation for firing in the kiln.



Sculptris Artist: Jose Conseco

Below is the breakdown of the Sculpt Mode features followed by the Paint Mode features.

Sculpt Brushes

Click on each icon or use the corresponding shortcut to select any brush. Rolling over the icon will reveal its name and shortcut keys. Sculpttris has various brushes, including a Crease, Grab, Draw Brush, and so much more.

Utility Controls

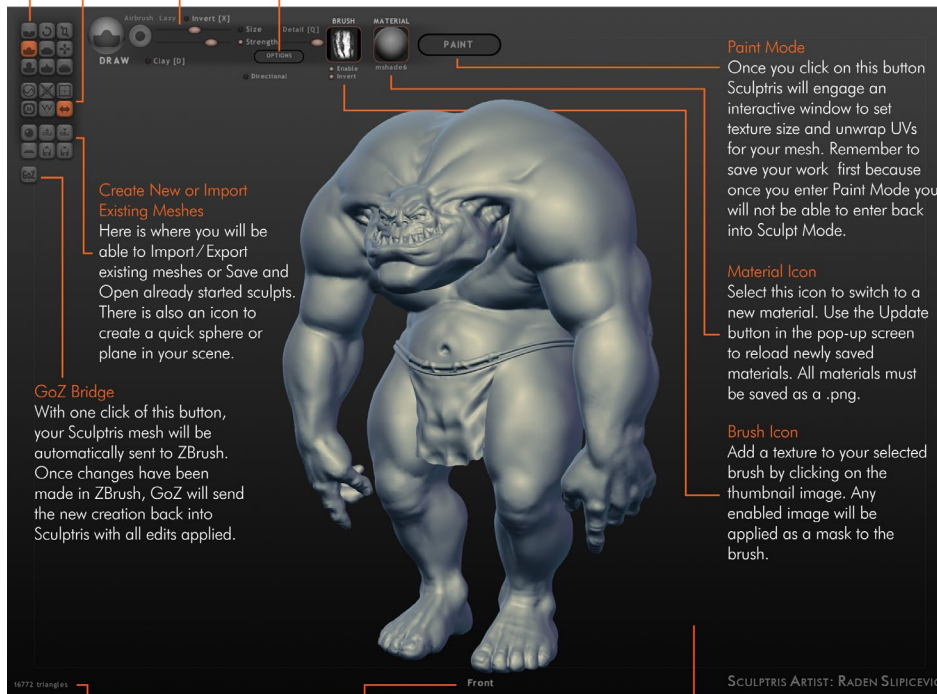
Here you will find the capability to turn your wireframe on or off as well as turning symmetry mode on or off. Use the Reduced Brush or Reduce Selected options to reduce Sculpttris' dynamic tessellation.

Brush Controls

Control your Brush size, Brush Strength and Dynamic Tessellation Detail with the three sliders in this section. The circle icon to the left dynamically changes to show these settings.

Options Menu

Find various options for Sculpt Mode within this menu: change the Sculpttris Navigation settings, load a new background .png into your UI, save an image to your computer, and so much more.



Create New or Import Existing Meshes

Here is where you will be able to Import/Export existing meshes or Save and Open already started sculpts. There is also an icon to create a quick sphere or plane in your scene.

GoZ Bridge

With one click of this button, your Sculpttris mesh will be automatically sent to ZBrush. Once changes have been made in ZBrush, GoZ will send the new creation back into Sculpttris with all edits applied.

Paint Mode

Once you click on this button Sculpttris will engage an interactive window to set texture size and unwrap UVs for your mesh. Remember to save your work first because once you enter Paint Mode you will not be able to enter back into Sculpt Mode.

Material Icon

Select this icon to switch to a new material. Use the Update button in the pop-up screen to reload newly saved materials. All materials must be saved as a .png.

Brush Icon

Add a texture to your selected brush by clicking on the thumbnail image. Any enabled image will be applied as a mask to the brush.

Triangle Count

The number of triangles being edited on the selected mesh.

Camera View

To snap camera view to Side, Front, Back, Top, etc., hold down the Shift key while rotating the mesh.

Work Space

The Sculpttris workspace is where all painting and sculpting takes place. Clicking on the Background button in the Options Menu can change background color, gradient, or texture. You can only import .png files for the background.

The left side of the interface has a grid of tool icons, which are used to select various sculpting tools or for performing operations such as saving and opening files.

At the top of the window there's a section containing various options for modifying the

operation of your currently selected tool, along with a few other controls.

Helpful information is found at the bottom of the window. To the left you can see the current triangle (or polygon) count. The middle displays the closest directional view of your model such as Front or Left.

This bottom information (including the Pixologic image) can be toggled on or off by pressing **F1** on your keyboard. Press **Tab** to toggle the whole interface, hiding everything except the model.

Press the **Spacebar** to bring up a small control wheel that has quick-access sliders for *Size*, *Strength* and *Detail*, as well as a toggle for turning the Brush Alpha off and on again. Also, whenever a brush pattern is enabled a small image of the selected Alpha will appear in the middle of this wheel. Click and drag on its image to rotate the brush pattern.

Click on any point outside the circle and drag horizontally to adjust the strength of your brush. Click and drag vertically to adjust brush size.



III NAVIGATION IN SCULPTRIS

Sculptris offers three navigation methods to accommodate your preferences and what you're already used to. By default, Sculptris launches with ZBrush navigation controls known as *Right-Click Navigation* and *Free Moving Navigation*. Alternatively, Sculptris's *Original Navigation* and hotkeys can be toggled activated via Options >> Traditional Sculptris Navigation.

Where hotkeys appear in the text you will often see two hotkeys listed. In these cases the first hotkey shown is what you would use with the default ZBrush-style navigation. The second hotkey listed is for the older Sculptris-style navigation.

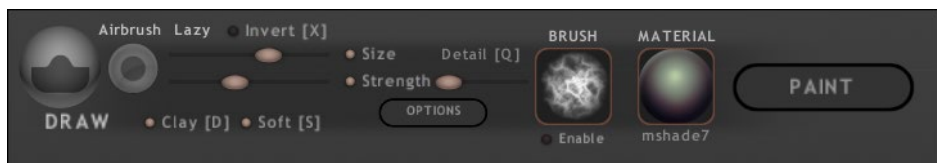
At the end of this document you will find a comprehensive list of Sculptris hotkeys and explanations of these navigation options.



Sculptris Artist: Bas Mazur

IV GENERAL CONTROLS

The general controls of Sculptris will have various parameters that can be altered upon selection of the tool. While these settings are usually remembered by each brush (and so can be different for each), settings that are common to multiple brushes can also be shared between them by using the *Unify Tool Settings option*. When this option is active, changes made to a setting for one brush will automatically be applied to all other brushes that have that setting in common.



SIZE SLIDER

Controls brush diameter from smaller to larger.

SIZE CHECKBOX

When active, Sculptris will use your graphics tablet's pressure sensitivity to control Size values, up to the maximum value specified by the slider setting. For example, if you have set the Size Slider to 70% then pen pressure can be used to dynamically adjust the brush size between 0% (with no pressure) to 70% (with maximum pressure).

Hotkey: 3

STRENGTH SLIDER

Adjusts the brush strength from lighter to heavier. This affects far the digital clay will be moved when you sculpt.

STRENGTH CHECKBOX

Uses tablet pressure to affect brush strength in the same way that the Size Checkbox affects brush Size. (Explained above.)

Hotkey: 4

AIRBRUSH

Continuously applies the selected tool as you brush, allowing the tool's effect to build up like paint from an airbrush.

LAZY

Smooths the movement of your cursor to help you get clean lines and/or curves. It helps eliminate minor hand shakiness as your mouse or pen moves across the model's surface.

INVERT BUTTON

Reverses the tool's effect, such as chiseling into the surface rather than raising it up. Not all tools have this option.

Hotkey: Alt or X

DETAIL SLIDER

As you sculpt your model, Sculptris adds mesh density to support the details being drawn. This slider controls how strongly Sculptris does this.

A higher setting means that more triangles will be created relative to the size of the brush, adding a lot of density to support really fine details. Setting the slider to zero tells Sculptris not to divide (or tessellate) the mesh at all.

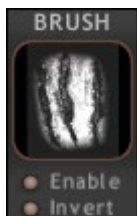
For most purposes it is recommended to leave this slider at a moderate value. This allows you to build up detail without having abrupt transitions between mesh densities on your model's surface, which could present problems later in your sculpt.

OPTIONS BUTTON

Opens an window with settings to control various parameters and do other things like saving an image of the current scene/view. This button has a dedicated section later in this documentation.

BRUSH ICON

Applies an image to the brush which is used as a mask/Alpha. This controls the strength of the brush with more detail than the default soft circle. You can choose an image by clicking on the thumbnail. You can also enable or disable it using the checkbox below the thumbnail.



When enabled, there are some additional options:

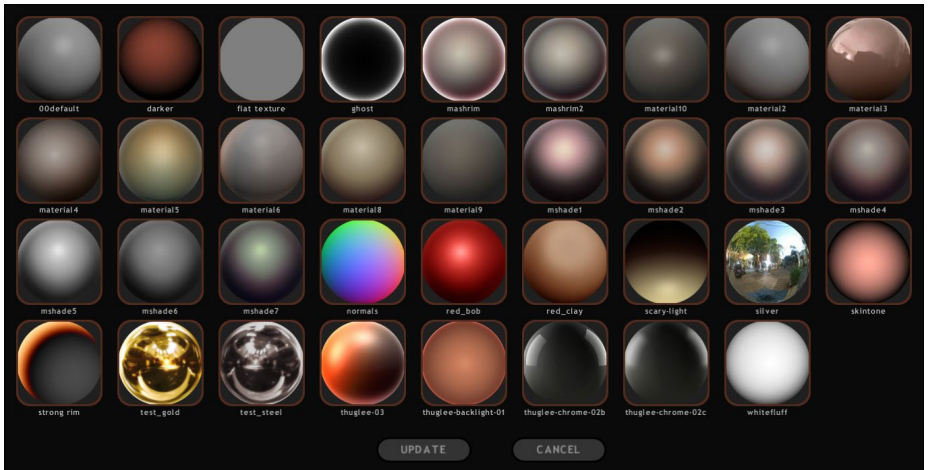
- **Directional** will rotate the brush image in line with the direction of the stroke.
- **Random** (available only when Directional is active) constantly varies the direction during your stroke.
- **Invert** flips the colors of the brush mask, so white becomes black. This reverses the pattern's effect on the brush.

MATERIAL ICON

The first set of buttons located at the top left of the interface represent the main sculpting tools. They are mapped to QWERTY keyboard keys. Hovering over an icon with the mouse/pen will show the tool's name and hotkey.

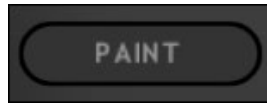


A tool is selected by clicking on it. The top section of the interface will change to reflect the name and options for that tool. Settings are remembered separately for each tool unless you choose "Unify Tools" in the Options popup.



PAINT BUTTON

Sends the mesh into paint mode so that you can paint its texture. Since you cannot return to sculpting after starting painting, be sure that you're happy with your model first.



See the dedicated Paint section later in this documentation for full info.



Sculptris Artist: Xen Wildman

V SCULPTRIS SCULPT BRUSHES

CREASE



Chisels a line into the surface. Inverse mode makes a sharp ridge instead.

This tool is useful for actual creases, as well as for defining shapes of various kinds. It can give more control than the Draw tool provides when creating sharp edges.

Hotkey: E

DRAW



This is the default drawing tool. It lifts the digital clay up from the surface of the model (or pushes it in if Invert is active). If a stroke crosses the same area multiple times, each time will build the surface up higher.

This brush has the following options:

- **Clay:** Makes a flatter stroke that is limited in height and tends to fill in cavities before it builds vertically. You must let go of the mouse button and start a new stroke to get more height.
- **Soft:** A slight variation of Clay with smoother edges.

Hotkey: D

FLATTEN



Creates an imaginary plane as you move your cursor across the surface. The click where you start your stroke determines the height of the plane. Anything within the area of the brush will be pushed toward that plane, flattening the surface. As you move the cursor, the angle of the plane rotates to match the surface but the height relative to the surface will remain the same.

- **Lock plane:** When this modifier is active, the height and angle will be fixed in the position determined by the beginning of the stroke. This allows you to build up a large surface that is completely flat.
- **Angle falloff:** Use this when sculpting with the Flatten tool when you're working near corner in the model's surface. This modifier prevents the Flatten tool from distorting the surface that's on the other side of the corner.

Hotkey: F

INFLATE



Makes the surface within the brush area swell outward like blowing up a balloon. This is very useful for enlarging or exaggerating any details that are already sculpted on the surface.

Hotkey: C

PINCH



Squeezes the surface inward toward the center of the brush position or stroke. It's exactly like pinching a bit of clay between your fingers.

Pinch can be used to sharpen corners and creases, or in some cases to help straighten edges.

Inverting this brush will push away from the stroke's center, softening the surface. When used on an outside corner it has an effect that's a bit like the Inflate brush. This option can actually be quite useful for creating abstract shapes and patterns.

Hotkey: V

SMOOTH



Relaxes the surface, blurring details and averaging out elevations. This is similar to wetting your finger and running it over a clay surface.

Hotkey: B

REDUCE



The other sculpting tools add triangles to the surface, giving you a finer mesh to work with. This tool has the opposite effect. Paint with this brush to remove triangles and reduce the amount of detail.

Since this tool works directly on the model's underlying geometry, selecting the Reduce tool will automatically enable the wireframe display so that you can see the brush's effects.

This tool uses the starting point to determine its strength. Whatever the mesh density is where you begin your stroke, that's what the brush will try to maintain as you move across the surface. If you want a greater effect, make a stroke from a coarse region into a finer one.

Inverse mode adds triangle density to the surface rather than removing it. This is

exactly the same as if you were making a stroke with the Draw tool, but it won't modify shapes. In other words, it can be used to refine an area without modifying sculpted details.

Hotkey: *Y*



Sculptris Artist: Damien Canderle

VI GLOBAL BRUSH TOOLS

When adding an object to the scene, the new geometry will automatically be selected and all transform tools will be placed in Global Mode with a pivot point at the center of the new object. This way you can conveniently move the object around and scale it until you're happy with its placement.

For each of the following three brushes (Scale, Rotate, and Grab), global control can be turned on or off. When turned on, it will affect the entire mesh, regardless of brush size. When turned off, it will only affect the area within the brush size, acting as a sculpting brush.

ROTATE



Twists the model or geometry. Click and drag to pull the handle out towards the circle and then drag around in any direction to control the angle.

This feature is most useful in Global mode, where it will ignore the brush size and operate on all selected areas. It works the same whether the selection is “soft”, created by painting on part of the surface or “whole”, clicking on an object to select the entire model.

Rotation takes place around the clicked point, relative to your viewing angle rather than the model's surface. Put another way, imagine that it's a disk spinning on the surface of your monitor and affecting anything behind it.

If the selected region touches the symmetry line, rotation axis will be locked to X so it won't deform the object.

If using ZBrush controls you can hold Shift to snap the amount of rotation to 45 degree increments.

The “Mirror” button available as an option to this tool will flip the selected geometry around.

Hotkey: R

SCALE



By default all geometry inside the brush radius will be enlarged or shrunk. Simply click a point and drag to resize.

Global mode will allow you to scale the mesh as a whole.

The “XYZ” option locks all axes together so it's a uniform scale in all directions at once. Without that option checked, this tool can scale freely sideways and

vertically as you move the mouse.

In all cases, the center point of scaling will be the point clicked, unless the pivot is active due to Global mode. In that case, the scaling will be relative to the object's center.

Hotkey: T

GRAB



Simply moves the affected region sideways along the view plane or locked to the symmetry plane. Global mode of course affects the entire object.

- **Limit:** Grab normally acts in a way that constantly deforms the surface as you move. This is useful for creating tentacles or flat structures and feels a bit like manipulating soft clay with your fingers. Limit changes this, allowing you to move the geometry around as much as you want to find just the right position before releasing the mouse and finalizing the new location.

Hotkey: G

VII SCULPT MODE UTILITY CONTROLS

REDUCE SELECTED



This feature requires that an area first be selected or masked. When Reduce Selected is then used, Sculptris will reduce the number of triangles in the selected area. Any masked areas within the selection will remain unaffected.

SUBDIVIDE ALL



Each click quadruples the number of polygons in your model by splitting every triangle or quad into four new ones. This affects everything in the scene, regardless of masking or selections.

MASK BRUSH



This brush allows you to paint protected areas on your model that will then be immune from editing. This allows you to focus on sections of the sculpt without worrying about accidentally changing things you want to keep.

To mask an area, simply select this brush and paint on the model. Inverse will allow you to modify areas that have already been masked, painting where you want to remove the mask.

Painting with the mask brush will add polygons to the surface just like any of the sculpting brushes do. This is needed if you want to mask a small portion too fine for the existing triangle density. You can of course press Q or drag the detail slider to zero if you want to mask without adding triangles.

Under ZBrush-style navigation, holding the CTRL key automatically enables masking without the need to physically click the brush icon.

WIREFRAME



Clicking this will toggle display of your model's wireframe, which appears as an overlay on top of the mesh. This allows you to see the actual triangles and get an idea of how efficient the geometry use is. Seeing the wireframe can also help you identify problem areas that you might need to fix by smoothing or reducing.

Hotkey: *W* or *Shift+F*

SYMMETRY MODE



This turns mirroring on and off. When Symmetry is turned on, anything sculpted on one side of the mirror plane will then be applied to the other side.

Because Sculptris assumes that when you turn Symmetry on you actually want your model to be symmetrical, turning this function off and then on again will have the effect of rebuilding the opposite side of the model. This means that any asymmetrical sculpting that you've done after turning Symmetry off will be duplicated on the opposite side of the model if you turn Symmetry on again, removing the asymmetry.

VIII SCENE MANAGEMENT

There are a variety of buttons for creating new primitive models that you will use as a basis for sculpting, starting a new scene or importing/exporting models. A few common rules apply to these options.

When creating or importing a new object you will have a choice of starting a new scene or adding the object to your existing scene. Starting a new scene will of course clear your document so be sure to save your work prior to doing this.

Adding the new object to your existing screen will begin with a spherical ghost that serves as a placeholder. You can drag this sphere around to pick a spot for it before clicking again to permanently add the mesh. Even Plane and OBJ objects will initially use the sphere placeholder.

After placing the object you can of course use the Grab, Scale and Rotate tools to refine its placement.

If you have multiple objects in your Sculptris scene it is possible to work with all of them at once or specific meshes. The process is as follows:

- Ctrl+D deselects all meshes.
- LMB to select a single object.
- Shift+LMB allows you to add more objects to your selection.
- Ctrl+A reselects all meshes.

NEW SPHERE



Creates a new sphere object, with options to either add it to the current scene or use it to start a new scene.

NEW PLANE



Creates a new planar object, with options to either add it to the current scene or use it to start a new scene.

IMPORT



Imports an OBJ or GoZ file, which can be used to start a new scene or be added to the current scene.

If the imported model has UV mapping, you will be given a choice to go directly to Paint mode or to remain in Sculpt mode. Remaining in Sculpt mode will strip the UV's from the model.

If the model has quads (four-sided polygons) they will be maintained. Keep in mind that certain Sculptris operations (such as detail reduction or sculpting while the Detail slider is set to a non-zero value) will convert these quads to triangles.

EXPORT



Uses the objects currently in the scene to create an OBJ file which will be saved to a directory of your choice. This OBJ file will only contain information concerning the points used to make up the model and how the triangles are connected to each other. (There is no information concerning object names, UV information, etc.)

In the main Sculptris Options menu there is an option to set vertex normals (the direction that the polygons face – in or out). If active, that information will be saved with the OBJ as well.

OPEN



Opens a previously saved Sculptris mesh (.sc1 file).

SAVE



Opens a dialog to save your scene as a Sculptris file using the .sc1 format and a filename of your choice.

You may also use the Ctrl+S (or Command+S) keyboard shortcut to save your work. Doing so will bypass the dialogue box and automatically save using the current filename. This will of course overwrite the previous version of the file.

GoZ



Sends the current scene into ZBrush as a single mesh. This will of course only work if ZBrush is installed on your computer and has the appropriate GoZ files installed as required by its GoZ documentation. If Sculptris determines that the GoZ required GoZ files have not been installed you will receive an error popup.

HOW TO INSTALL GoZ

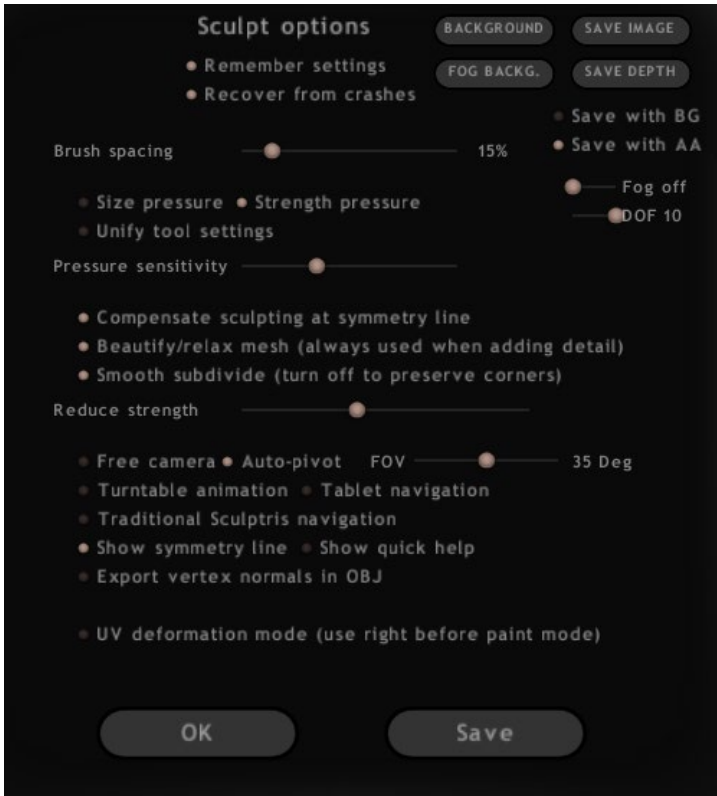
Because GoZ is a ZBrush feature, the files necessary for GoZ to operate are included with the current GoZ update for ZBrush which may be downloaded from the plugins page on the Pixologic website. (<http://www.pixologic.com/zbrush/downloadcenter/zplugins/>)

Upon unzipping the downloaded file you will have a folder labeled GoZ. Within this folder you will find instructions describing the installation process of GoZ for Sculptris, as well as how to tell ZBrush to send to Sculptris when pressing the GoZ button. Please follow these instructions for installation of GoZ.

Once done, the GoZ button in Sculptris will be able to be used to send your creations directly to ZBrush.



IX SCULPT MODE OPTIONS WINDOW



Click the **Options** button to open and control various settings and parameters that pertain to Sculptris as a whole.

REMEMBER SETTINGS

When this option is active changes to the Options settings will automatically be saved even if you don't click the Save button. If you are happy with your current profile it is recommended that you disable this setting. That way you will be able to tweak your settings on the fly while still being able to always launch Sculptris with your preferred settings.

RECOVER FROM CRASHES

By default, Sculptris periodically saves your work automatically. Should you experience a crash, restarting Sculptris will load the most recent of these backups. This way a crash will represent only a minor setback in terms of lost work. You can disable the

autosave feature by turning off this option, in which case Sculptris will no longer make regular automatic backups.

BACKGROUND

If you would like to sculpt against a background reference image (or simply a background that you find pleasing to the eye), use this option to choose the image that will be displayed.

Background images can be any size or dimension; they will be automatically scaled to fit the Sculptris window. (You will naturally get the best results if you use an image that matches your desktop resolution.)

To return to the default image, click this button and select the background.png file which is located in your Sculptris Data folder.



Sculptris Artist: Yongkiat Karnchanapayap

FOG BACKG

When saving an image of your scene you can add fog to the background. The Fog Backg option allows you to select an image that will be used to apply color to the fog.

If you use the same image that has been set as the scene's background image, the

fog will have the effect of adding the background image that you've been sculpting to your rendered image as well.

You can also use gradients and other patterns to create interesting backgrounds that complement your work.

SAVE IMAGE

Renders the scene and saves it as an image file. Options by the Save Image button directly affect the results:

- **Save Depth:** Creates a 16-bit grayscale map of your scene which will be saved alongside the rendered image. This serves as a depth map that you can then use in programs like Photoshop as a mask to control various effects.
- **Save with BG:** Saves the image with the current background image. If no background image has been specified, a flat black color will be used instead.
- **Save with AA:** Makes curved edges look better by removing the pixelated stair-stepping effect caused by using square pixels to display a curved edge. (AA stands for anti-aliasing.)
- **Fog Slider:** Adds distance fog to the render and determines the effect's strength.
- **DOF Slider:** Adds a of Depth-of-Field effect, blurring more distant parts of the scene. Higher slider values result in a stronger effect. Enabling this option will increase render time. (You can achieve similar effects by using the Save Depth option and then using the depth map as a mask in Photoshop to control a blur filter.)

GLAA

Enables real-time anti-aliasing as you sculpt, performed by your graphics card's OpenGL feature.



Sculptris Artist: Anthony Myers

Note:

This option is not currently available on the Mac.

BRUSH SPACING

Brush strokes are made up of a series of dots. This setting determines the spacing between those dots, in effect allowing you to control whether you're creating a solid or dotted line.

This option is ignored when Airbrush is active.

Paint mode has its own brush spacing option which is set separately from that of Sculpt mode.

UNIFY TOOL SETTINGS

Many tools have common settings between them such as size and strength. Enabling Unify Tool Settings tells Sculptris that when you change these settings for one tool they change for all tools. When this option is disabled, Sculptris will remember each tool's individual settings rather than treating them as global values.

SIZE PRESSURE

Sets the Size toggle (next to the Size slider) to always be on so that Sculptris will always use pen pressure to control brush size.

STRENGTH PRESSURE

Sets the Strength toggle (found next to the Strength slider) to always be on so that Sculptris will always use pen pressure to control brush strength.

Pressure Sensitivity

Controls how readily Sculptris responds to pen pressure. Higher values will make Sculptris react to even the slightest change in pressure.

COMPENSATE SCULPTING AT SYMMETRY LINE

When sculpting near the symmetry line, the two copies of your brush can overlap and double the effect. Enabling this option will restrict each copy of the brush to impact only its own side of the symmetry line.

BEAUTIFY/RELAX MESH

As you sculpt, Sculptris is normally adding more triangles to the mesh so that it can support the finer details that you're creating. At the same time, Sculptris automatically relaxes the mesh around the edges of the brush stroke, making a more gradual transition between polygon densities. However, that smoothing effect can also relax the details

that you've been sculpting, causing them to slide apart as the surface relaxes.

Disabling this option tells Sculptris not to relax the surface while you sculpt. This allows you to pinch and pull surfaces very tightly and with the greatest control. It is recommended to only disable this option when you have set your brush to not divide while sculpting.

SMOOTH SUBDIVIDE

As Sculptris divides triangles it also softens their edges, resulting in a smooth, curved surface. However, there may be times when you want the faces and edges to remain sharply defined – such as when working with a mechanical surface. In that case, disable the Smooth Subdivide option.

When this option is disabled, Sculptris will continue to add triangles where necessary but will retain the overall shape of the original, lower resolution surface.

REDUCE STRENGTH

This option affects the strength of the Reduce button, controlling how aggressively it will remove triangles from the mesh (known as decimation) when used. Increasing this slider setting means that you won't have to click the Reduce button as often to get a dramatic reduction in polygons. Reducing the slider setting decimates the mesh more gradually so that you don't accidentally wipe out your details by going too far.

FREE CAMERA

By default, the Sculptris camera operates with a strict notion of what's up and what's down. You can pan and tilt but won't ever be able to go completely over the top of the model. This is just like in the real world where you can lift the camera higher but can't actually float over top of your subject and come down the other side.

Enabling Free Camera removes all constraints on camera movement, giving total freedom as you spin the mesh. However, this can also result in some surprise behavior at extreme angles, as the view can suddenly flip upside down. It effectively moves you into space where notions of up and down are meaningless.

AUTO-PIVOT

Active by default, this setting tells Sculptris to try and keep a logical pivot point that your camera will stay aimed at as you rotate. This point is based on the visible geometry and usually is placed slightly below the visible surface straight ahead of the camera.

It should be noted that the pivot point only affects rotation. When moving, the pivot point will be recalculated after the movement and future rotations will then be relative to this new pivot point.

Disabling Auto-Pivot allows the camera to rotate freely without regard for where the model is located, potentially moving the object out of view.

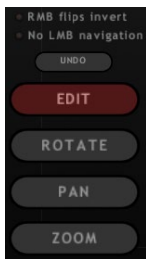
FOV

This setting controls the camera's field of view, similar to the focal length of a camera. By adjusting between "near" and "far" settings you can have a very narrow field of view with minimal perspective distortion or a very wide field of view with considerable perspective effect.

TURNTABLE ANIMATION

Continuously spins the camera around the scene to display it from all angles. This turntable effect will continue until the Turntable animation option is turned off again.

TABLET NAVIGATION



Enabling this option displays a special set of overlay buttons in the bottom left corner of the Sculptris interface. These buttons allow you to manipulate the camera with just a single mouse button or the tablet pen, without holding any modifier keys.

To use, press one of the buttons to activate that mode. Next, simply click+drag on the screen to perform the specified action.

TRADITIONAL SCULPTRIS NAVIGATION

By default, Sculptris now uses the same hotkeys as ZBrush for any common functions such as moving, scaling and rotating. Disable this setting to revert to the "classic" hotkey settings that earlier versions of Sculptris used.

For your reference, a complete list of hotkeys is provided at the end of this document.

SHOW SYMMETRY LINE

When enabled, this option displays the center line of your sculpt as an actual drawn line on the model's surface. This can make it easier for you to visualize the halves of your model when you are working with symmetry.

SHOW QUICK HELP

When enabled, Sculptris displays helpful text at the bottom of the interface, as well as the Pixologic logo. When toggled off, this information is hidden.

Hotkey: F1

EXPORT VERTEX NORMALS IN OBJ

When exporting your model from Sculptris as an OBJ, this option tells Sculptris to also include the object's vertex normals as part of the file information. Enable this if your model appears "inside out" when imported into your other application.

UV DEFORMATION MODE

This option gives you some control over the way Sculptris calculates UV mapping when entering Paint mode. When this mode is enabled, any sculpting that you make to the model will influence the UV's. By default, Sculptris attempts to map the model in a way that equalizes the use of texture space across its surface. Deformation mode lets you weight portions of the mesh to give them more space in the mapping.

For example, if you are creating a head and want to give more texture space to the face (allowing you to paint more detail in that area) you would enable UV Deformation mode and then inflate the facial polygons. The larger you inflate them, the greater percentage of the texture space they will receive.

Disabling this mode again snaps the sculpt back to how it appeared before you started sculpting your UV deformations.

SAVING THE OPTIONS

- **OK:** Any changes you make in the Options are automatically applied as you make them. Clicking this button then closes the Options window.
- **Save:** Save these settings for future Sculptris sessions. You should only need to use this button if you have disabled the Auto-Save option.

X OVERVIEW OF PAINT MODE

Point Brushes

Here you can chose to paint directly onto your UV layout texture or paint a bumpmap directly out of Sculptris by using the four brushes here.

Utility Controls

Use these buttons to turn wireframe or symmetry mode on or off. Remember that once Symmetry mode is turned off all A-symmetry painting will be lost if symmetry mode is pressed again.

Brush Icon

Apply any alpha to the brush by clicking on the icon. The enabled alpha will apply a mask to the brush for a unique point pattern.

Texture Icon

Click on the icon to load any image into your textures. The enabled texture will be applied like paint to the selected mesh.

Paint Controls

Change your primary and secondary colors by clicking on the circle icons. The three sliders control your brush's size, strength, and hardness.



Material Icon

Give yourself the capability to paint various materials on one mesh. Click this icon to load the materials that will be used during the painting process.

Paint Options

This menu contains various paint options: turn on the capability to color and paint bumpmaps at the same time, control your cavity painting settings based on bumpmap or geometry, save an image to your computer, and so much more.

Advance Paint Options

Save your painted mesh as a texture file that can be applied to your UV layout. You will also find buttons to save out a Normal or Bump Map. Use the export/import PSD buttons to project paint changes made in Photoshop onto the selected mesh.

Create New or Import Existing Meshes

Here is where you will be able to only Import/Export existing meshes or Save and Open already painted meshes. There is also an icon to create a quick sphere or plane. None of these buttons will export/import texture files.

Masking

Quickly enable or edit a mask for greater control during the painting process.

Triangle Count

The number of triangles being edited on the selected mesh.

Camera View

To snap camera view to Side, Front, Back, Top, etc., hold down the Shift key while rotating the mesh.

Work Space

The Sculptris workspace is where all painting and sculpting takes place. Clicking on the Background button in the Options Menu can change background color, gradient, or texture. You can only import .png files for the background.

With Paint Mode, users are capable to paint directly onto the texture map of the selected model while it's wrapped onto the model's surface. In other words, you paint exactly what you want to see and this painting is completely independent of the number of polygons in your model.

Upon clicking on the Paint Mode button (switching you over from Sculpt Mode) Sculptris will automatically start by apply UV mapping to your model. This is necessary to tell the software what portions of the model correspond to which parts of the texture map.

Instead of using UV mapping created by Sculptris you are able to import a pre-mapped model. To do this, you must first be in Paint Mode and then use the Import button found there. So you could export your model from Sculptris as an OBJ, assign mapping in another application, then switch to Paint Mode in Sculptris and from there import the OBJ that has your desired mapping.

It is important to remember that once you have entered Paint Mode you may not return to Sculpt Mode. This is because UV mapping depends upon the point structure of the model, and the way Sculptris divides parts of a model as you sculpt causes the points to change dramatically. That would immediately break any UV mapping that has been assigned, which in turn makes any texture painting useless. Make sure that you're totally happy with your sculpting before you send your model to Paint Mode!

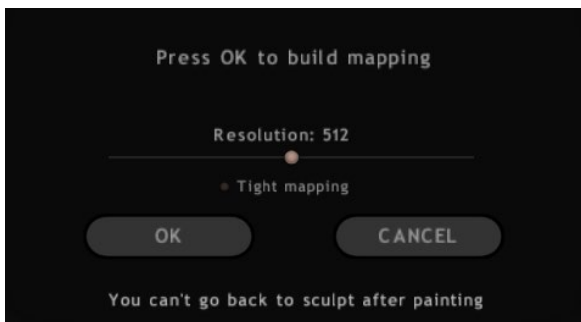


Sculptris Artist: Marc Nagel

UV UNWRAP DIALOG CONTROLS

Before delving into how to paint your model it is necessary to first cover the UV controls found in Sculptris.

Begin by pressing the **Paint Mode** button. This immediately opens a dialogue with settings for the automatic UV mapping process.



RESOLUTION

This slider determines the dimensions of the square texture, measured in pixels. The slider goes to a maximum value of 2048, which results in a texture that's 2048x2048 pixels in size. You will not typically want to choose a value smaller than the default value of 512.

TIGHT MAPPING

By default, Sculptris will apply some relaxation operations to the UV mapping. This generally results in a more uniform distribution of the polygons across the texture, however it can result in some texture stretching in places – especially with low polygon models. Enable Tight mapping when such stretching would be a concern, disabling some of Sculptris' UV smoothing and deformation features.

VALIDATING THE UVs CREATION

- OK: Approves your settings and starts building the UV mapping.
- Cancel: Returns you directly to Sculpt mode. No UV mapping will be created.

PAINT BRUSHES AND TOOLS

While in Paint mode, the layout of the interface remains the same as when in Sculpt mode. However, different tool buttons will now be available, pertaining specifically to painting textures.

Hold Shift while painting with Color, Bump or Flatten Bump to smooth what you've painted on the corresponding map.

PAINT COLOR



Brush strokes will apply color to the texture. You can modify this color by selecting a texture sample to paint with and/or a brush mask. Inverting the brush switches from painting with the selected foreground color to the background color.

Hotkey: D

PAINT BUMP



Instead of your paint brush applying color to the model texture, it now applies grayscale values to the mode's bump map.

A color texture can be applied to the brush, but in this case lighter colors in the texture will result in positive bump values (raising the surface of the object) while darker colors cause indentations in the surface.

This is an excellent way to create small bump details such as skin pores, veins, cracks and patterned surfaces.

Hotkey: B

FLATTEN BUMP



This brush reduces the amount of bump effect that has already been painted by averaging all bump values toward zero. You can gradually reduce the amount of bump present, rather than erasing it entirely.

Hotkey: F

FILL



This is an action rather than a brush and as such it immediately applies to the entire model. It quite simply fills the entire texture (or bump map) with the current foreground color. The amount of fill is determined by the current Strength setting, allowing you to tint the map rather than completely overwrite it.

The particular map that the action is applied to (color or bump) is determined by which paint brush you have selected.

Hotkey: Ctrl+F

OTHER TOOLS & HELPFUL INFO

The rest of the buttons on the left side of the interface do what you expect from Sculpt. Keep in mind, however, that if you choose to add a new object this will return you to Sculpt mode. As mentioned above, there is currently no way to sculpt on a painted mesh, so adding a new object to your scene will also discard any painting that you've done.

Below these buttons are three checkboxes. They control the paint mask by letting you edit or show/hide it. A useful hotkey is M, which cycles through these typical mask operations so you can enable, edit and disable the mask while working.

Pressing Ctrl+C will copy the current map (color or bump, depending on which brush you have selected). If you are editing a mask you can copy that as well. This option is very useful since you can copy a mask, make a temporary change and then paste (Ctrl+V) the old mask back in when you're done. Pasting will also respect the tool strength, so you can fade towards the copied map. For example you can copy a map, continue painting, then paste the copied map back over it to fade what you just painted.

If importing your model from another application, be sure not to use overlapping UV's. Each point on the UV mapping must correspond to a single point on the model. (For example, you should not lay your UV's out so that both hands share the same UV coordinates.) Attempting to use overlapping UV's is not currently supported and will most likely result in unexpected behavior when painting the model.



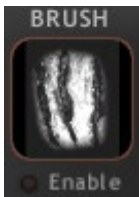
Sculptris Artist: Bobby Bath

TOOL ADJUSTMENTS AND OTHER PAINT CONTROLS

The top of the Sculptris window contains an area similar to the one found in Sculpt mode. A simple text description tells you which painting tool is selected. There are also the three main brush sliders for Size, Strength and Hardness. Size and Strength are similar to their Sculpt counterparts. Hardness controls the falloff of the brush along its radius – basically the equivalent between a hard and soft pencil.

There are also two thumbnail squares to the left which represent different images that can be used to make patterned strokes.

BRUSH IMAGE

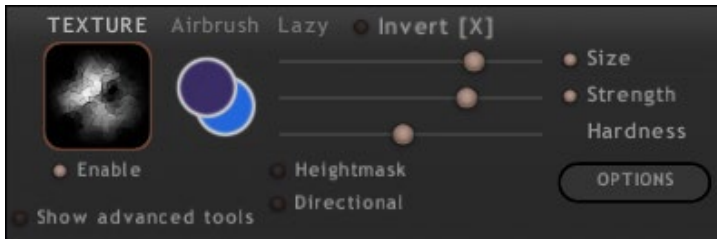


This is a mask/alpha that modifies brush strength based on the colors in the image. White is full strength, grey is a middle range and zero is no strength.

Even though the image is visible in the thumbnail at all times it will only affect your brush when Enable is turned on. While enabled there will be another checkbox that allows you to invert the image's values.

TEXTURE IMAGE

This is a color texture that allows you to paint with a color pattern instead of the selected foreground color.



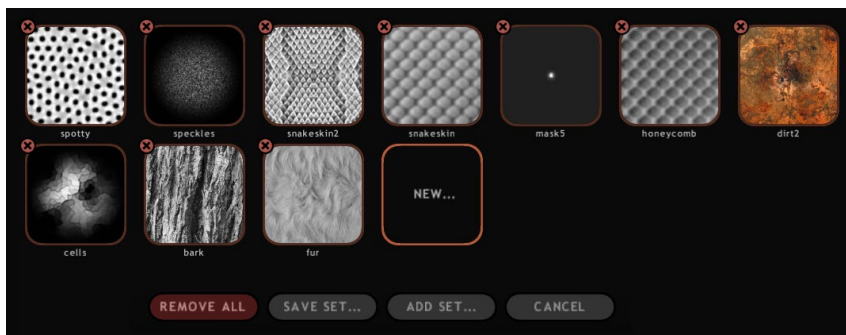
While you can't normally paint with color and texture at the same time (texture overrides color), there are ways around this:

- Airbrush.
- Holding the tablet pen in place, which causes an overdraw effect.
- Disable pressure sensitivity.
- Use a mouse.

When either Brush Image or Texture Image is activated (or both) you can also turn on the **Directional** option. As with the same setting in Sculpt mode, this makes the im-

age rotate with the stroke path as you paint. The **Random** option is also present and constantly randomizes the image orientation as you paint.

As with Sculpt mode, **spacebar** brings up a floating menu. This menu allows you to quickly toggle or otherwise change the Brush and Texture images. You can adjust orientation by clicking on the thumbnail and dragging sideways.



Browsing for an image opens the Texture Set Navigator. This is very similar to the Material Browser, but has some extra functionality:

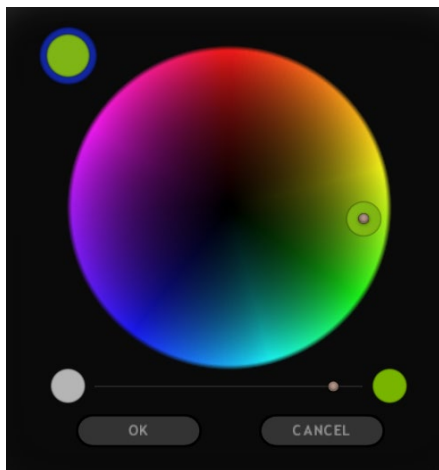
- **Click a loaded thumbnail** to select that image.
- **To add an image to the set**, click the “New” box and then browse to where the image is stored on your computer.
 - Continue adding any additional images that you wish to include in the set, then click **Save Set** to save this group for later use. In this way you can build all-purpose texture libraries.
 - **To remove an image from the set**, click the red X found at the upper left corner of the thumbnail. You will of course need to save your changes to make this removal permanent.
 - **Add Set** allows you to open a previously saved set.
 - **Remove All** clears the current set so that you can start a new one. The empty “New” thumbnail will remain.
 - **Cancel** exits the Texture Set Navigator without making any changes or selecting a new texture.

When a texture is activated, it will be shown on the model using a ghosted overlay. The edges of this overlay are faded out if you’re painting on an area that doesn’t have enough resolution in the UV map to support the amount of detail found in the texture. The entire overlay also fades to reflect the current brush strength.

COLOR PICKER

Clicking any color swatch brings up a color selector. The main color wheel is used to select the desired hue and brightness. The slider underneath lets you adjust saturation. Press X to toggle between selecting foreground and background color. Alternatively,

invert the current Paint brush and then bring up the Color Picker again.



Hotkey: S

SAMPLING SURFACE COLOR

While holding the C key, click anywhere on the model surface to pick the color found there.

Hotkey: C

Note:

The bump painting ignores the current color, which means that while you can still sample a color from the texture map that won't affect your bump painting.

HEIGHTMASK

This option allows your painting tool to automatically mask itself as you paint so as to protect high or low portions of the model. It is able to be set to sample from the model's geometry, from height values generated by the bump map, or both at once. Also known as cavity masking, this is an excellent way to do things like alter the color of skin pores while not affecting the surrounding skin tone.

- **Bumpmap** mode uses only information from the bump map to protect the surface. The model's actual geometry is ignored.
- **Geometry** mode ignores the bump map and uses only the model's actual geometry to protect the surface.

Both options factor in the brush size. The smaller the brush size the more readily it paints deeper into cavities. The desired mode is set from the Options menu, explained

later in this document.

The **Cavity** checkbox is used to determine whether to paint “highs” or “lows”.

SHOW ADVANCED TOOLS

Activating this expands the interface with another series of buttons. These are mainly for import and export of the texture and bump maps. Save and Open simply handle the color texture as an image that you can save and then load back in. Loading any other image is allowed as long as it's of the same dimensions as the current texture and in a supported image format. This can be combined with copy/pasting and the Strength slider to mix various source textures.



The following export options are available in Sculptris:

- **Save TexMap:** Saves the texture as a .png file, based on the model's UV mapping.
- **Open TexMap:** Imports any .png file and applies it to the currently selected model or 3D mesh.
- **Save Normals:** Generates a map from the model's surface normals, based on the UV mapping. Note that while normal maps can be exported from Sculptris they cannot be imported.
- **Save Bumps:** Saves a 16-bit TIFF image with the bump height information. This map's greyscale values are automatically adjusted for the range actually used, so pure white will always represent the maximum positive bump value used in your model. Bump maps cannot be imported into Sculptris.
- **Export PSD:** Creates a specialized texture map for additional painting in Photoshop. This PSD file will have the base color and 3D shading as separate layers with an additional empty layer for you to paint additional details on.
- **In Photoshop** (or another PSD-capable image editor), open the file and make any changes on the empty layer. You can of course create new layers, so long as you then merge them with the empty one and maintain the same position relative to the base layer and the shading layer. When done, save the file using the same name.
- **Import PSD:** After saving painting that you've done in Photoshop (see Export PSD, above), use this button to import the file back into Sculptris. Sculptris will automatically return your model to the same position it had been when the PSD was

exported and what you painted in Photoshop will be applied to the Sculptris model. In the process, special calculations will ensure that your changes do not accidentally get painted onto portions of the model that are hidden behind what is currently visible.

Note:

These same calculations will also prevent changes from being made to areas that are angled drastically to the side. This is to prevent stretching or other unsightly artifacts.

The Export/Import PSD feature should be very familiar for people who have previously used ZAppLink in ZBrush. It's similar in many ways.



Sculptris Artist: Anthony Myers

MATERIALS

In Sculpt mode, materials provide a way to view the model under various lighting conditions. In Paint mode, materials can actually be painted onto the model's surface and multiple materials can even be used on a single model.

On either side of the Material thumbnail there is a dot button. Clicking these will cycle through the available materials as well as allow you to add new ones. Materials can be removed by pressing the X icon.

Beneath the Material thumbnail is a checkbox which is used to specify whether the material's color should be used in addition to the lighting information.

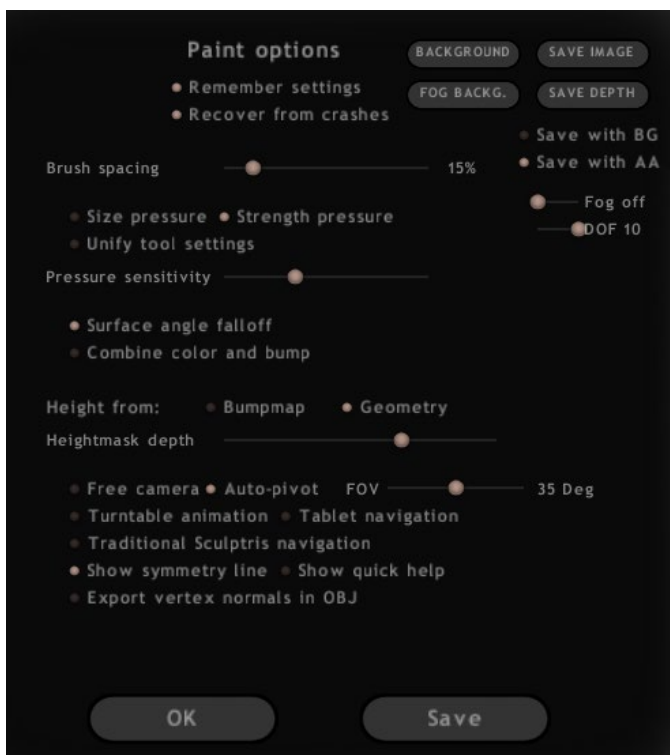
Above the thumbnail is the material's name. The number in parenthesis next to the name is the material's position in the stack/list.

When you add a new material, it will initially be empty. Click the thumbnail to select one of the available material images. By default it will be colorless. You can click the **Edit** checkbox, which allows you to edit the material's alpha mask by painting it using the standard Color brush.

As an example, you could start with the default material and added a shiny one. Painting the mask via Edit would then be like polishing the surface to a glossy finish.

PAINT MODE OPTIONS WINDOW

The options window in Paint ode has relatively the same controls as those found in Sculpt Mode. We will not repeat descriptions for those items here. However there are also a few new features to familiarize you with, which are described below. These settings are only available when in Paint mode.



SURFACE ANGLE FALLOFF

Imagine holding a sheet of cardboard in front of you at an angle and then spraying a single spurt with a spray can. If you then turned the cardboard to face you directly you'd see that the angle caused your circle to become an oval. Surface Angle Falloff prevents that sort of problem as you paint your textures by fading paint that's applied to oblique

surfaces. It also prevents paint from being applied to back-facing surfaces or places hidden behind other geometry.

Disabling Surface Angle Falloff overrides that feature so that you paint straight through the model. Everything within the brush radius will be affected, even if it's on the back side of the mesh. For example, if painting a thin wing you would affect both the back and front with the same stroke.

COMBINE COLOR AND BUMP

This option allows you to paint using both tools at once. An example of where this is useful is when you want to paint blue skin veins or dark scratches on an object. This setting is also works when editing a material mask.

HEIGHT FROM: BUMPMAP OR GEOMETRY

This is the height mask setting described previously, allowing you to combine bump painting with geometry adjustments to protect raised and indented surfaces.

HEIGHTMASK DEPTH

Controls the strength of the height masking effect. You can use this slider to get deeper into porous surfaces, protect more of a bumpy surface, etc.



Sculptris Artist: Jose Conseco

XI SCULPTRIS HOTKEYS

As previously stated, Sculptris has its own unique hotkeys which will be familiar to users of earlier versions. It also now includes ZBrush's native controls for those artists with a ZBrush background.

By default, Sculptris will launch with ZBrush hotkeys enabled. If you prefer to use Sculptris hotkeys, this can be enabled in the Options menu by activating the **Traditional Sculptris Navigation toggle**.

Keyboard hotkeys for specific buttons are shown by hovering the pointer over them.

Sculptris has default settings and layout which are overridden by changes that you might make. When you save your changes, they are remembered in the config.txt file which is found in the main Sculptris folder. Should you ever wish to restore Sculptris to its factory settings, simply delete or rename the config.txt file.

The list below uses PC conventions. Mac users should simply use the Command key any time the list calls for Ctrl.

TRADITIONAL SCULPTRIS NAVIGATION

LMB/pen	Sculpt positive
RMB/eraser	Sculpt negative
Ctrl+Z	Undo an operation. There are 11 levels of history.
Ctrl+left mouse	Inverse sculpt, like right mouse button
Shift+left mouse	Smooth hotkey
Mousewheel	Zoom in and out
Shift+mousewheel	Adjust brush size
Ctrl+mousewheel	Adjust brush strength
Plus/minus keys	Same as mousewheel, i.e. zoom, size, strength
Space	Popup brush controls (useful for tablets)
Middle mouse button	Rotate the view
Alt+left mouse	Rotate the view
Alt+right mouse	Pan the view

Shift+ middle mouse	Pan the view
Alt+shift+ left mouse	Pan the view
Alt+ctrl+ left mouse	Zoom the view
Tab	Show/hide UI
Z	Lock camera view to nearest axis
Ctrl+F	Clear/fill selection mask (see below)
H	Hold and click or drag to hide areas or objects. Right mouse button or shift isolates them.
Ctrl+H	Show all
P	Toggle or place (hold and click) pivot point, which can be used for rotation and scaling
Q	Toggle detail slider (between zero and previous value)
A	Toggle airbrush
L	Toggle lazy brush
T	Show UV map (in Paint Mode)
Ctrl+A	Select all
Ctrl+D	Deselect all
Ctrl+I	Invert selection mask
Ctrl+N	Add new sphere
Ctrl+C	Copy selected objects
Ctrl+X	Cut selected objects
Ctrl+V	Paste selected objects
Delete	Remove selected objects
1/2	Toggle mask/texture (no texture in sculpt mode)
3/4	Toggle pressure sensitivity for size/strength
U	Disable undo
Brackets	Control brush size (only on Window)

TRADITIONAL ZBRUSH NAVIGATION

LMB/or pen	Sculpt positive
ALT+LMB/or pen	Sculpt negative
Ctrl+Z	Undo an operation. There are 11 levels of history.
Shift+ left mouse/or pen	Smooth hotkey
Popup brush controls	Popup brush controls
Click & drag Background	Free Rotate
Right-click & drag	Rotate (can be over the model)
Alt+ Click & drag Background	Pan the view
Alt+ Right-click & drag	Pan the view (can be over the model)
Click+ drag, press Shift	Constrain to 90-degree rotation
Alt+ Click, Release Alt, drag Background	Rotate around Z-axis
Alt+ Click, Release Alt, drag Background	Zoom in and out
Ctrl+ Right-click & drag	Zoom in and out (can be over the model)
Shift	Lock camera view to nearest axis
Ctrl (hold down) + paint on surface	Paint mask on object
Ctrl+Alt (hold down) + Paint on surface	Delete or paint reverse mask
Ctrl+ Click Background	Reverse mask
Ctrl+ Click+ drag Background	Clear Mask
Shift+ Ctrl+ Click & drag	Show mesh portion
Shift+ Ctrl+ Click Background	Show entire mesh
Shift+ Ctrl+ Click & drag Background	Reverse visibility
Tab	Show/hide UI
P	Toggle or place (hold and click) pivot point, which can be used for rotation and scaling
Q	Toggle detail slider (between zero and previous value)
A	Toggle airbrush
L	Toggle lazy brush

T	Show UV map (in Paint Mode)
Ctrl+N	Add new sphere
Ctrl+C	Copy selected objects
Ctrl+X	Cut selected objects
Ctrl+V	Paste selected objects
Delete	Remove selected objects
1/2	Toggle mask/texture (no texture in sculpt mode)
3/4	Toggle pressure sensitivity for size/strength
U	Disable undo
Brackets	Control brush size (only on Windows)



XII NOTES
