ZBRUSH

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"***ZBrush*** *2.0 has been instrumental in our current production pipeline, allowing us to take our models to a new level of fidelity that gives Fasa Studio cutting edge visuals in our next-generation of video games.*" -**Steve Suhy, Lead Modeler, Fasa Studio/ Microsoft Game Studios (August 4th, 2004)**

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Product Name

Pixologic ZBrush 2.0.

Product Summary

ZBrush™ is an award-winning 2D and 3D image creation and processing application powered by a real-time rendering engine. Based on unique "pixol" technology, **ZBrush** enables artists to paint an image with depth- applying both 2D and 3D effects in one integrated, real time workspace. Artists can paint with color, material, texture and depth; push and pull the canvas; and sculpt and texture 3D models. **ZBrush** combines the benefit of pixel-by-pixel control (like a 2D painting program) with the real-time power of 3D modeling and rendering engine (like a 3D application). That means instant feedback, which gives artists more time to experiment , play, and ultimately be more productive.

Target Markets

People from all over the world and in all types of industries are using **ZBrush** to do things they never knew were possible or thought too complex to try. **ZBrush** bridges the gap between 2D and 3D for concept illustrators, developers, texture artists, modelers, and animators, particularly in the movie and game industries. By opening the market to a new form of art creation, **ZBrush's** target user base is practically anyone involved in 2D or 3D graphics in any way- in other words, pretty much anyone! **ZBrush** is setting a new pace for artistic expression and production. With instant feedback encompassing its unique synthesis of 2D and 3D capabilities in a single stand-alone tool, **ZBrush** offers tremendous flexibility and appeals to a wide audience.

Company Information

Founded in 1997, **Pixologic Incorporated** (http://www.**ZBrush**.com) develops and markets innovative software products for digital artists. The privately funded company is based in Los Angeles, California, with Research and Development in Silicon Valley.

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© Krishnamurthy Martins Costa

Pricing

Suggested Retail Price: US $489

(International prices vary; please contact the appropriate distributor or click the BUY NOW link at the **ZBrush** Web site (www.**ZBrush**.com) for pricing information and international currency in Euros, British Pounds, Japanese Yen, and Australian Dollars.)

Availability

ZBrush 2.0 is currently shipping for both Windows and Macintosh platforms.

System Requirements

Windows

- **OS:** Windows 98 Second Edition (Windows 2000 or newer recommended)
- **CPU:** PII with MMX, 200MHz (fast PIII or newer with hyper-threading recommended)
- **RAM:** 256MB (512 - 1024MB recommended)*
- **Monitor:** 1024x768x32-bit monitor resolution (1280x1024x32-bit recommended)

Macintosh

- **OS:** OXSX 10.0 or newer
- **CPU:** G3 or newer
- **RAM:** 256MB (512 recommended, 1GB for multi-million-poly models)*
- **Monitor:** 1024x768x32-bit monitor resolution (millions of colors)

*ZBrush will launch with 128B of RAM installed, however 256MB is the minimum practical amount.

Technical Support

Pixologic Inc. offers Web, email, and phone support options:

- **Web:** Artists can answer many of their questions at our online **ZBrush-Central** forum site. This service is available 24 hours a day by visiting http://www.**ZBrushCentral**.com.
- **Email:** Email support is available at support@pixologic.com. Please be sure to include your **ZBrush** version and serial numbers and purchase information.
- **Phone:** Phone support is available from 9am to 5pm Pacific time by dialing 1-888-748-5967. Please be in front of your computer with **ZBrush** running when requesting phone support


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Documentation

ZBrush 2.0 includes the following documentation:

- **ZBrush 2.0 Practical Guide:** This book contains nearly 500 pages of tutorials that walk you through **ZBrush** from the very beginning to advanced functions, including integrating **ZBrush** with many leading animation packages.
- **ZBrush 1.55b Reference Manual:** An electronic version in PDF format is available in the DOWNLOAD section of the ZBrush Web site.
- **Autonotes:** While using **ZBrush**, hovering the cursor over any interface element opens a dialog providing context-sensitive help.
- **ZScripts:** ZScripts are a powerful way to automate complex functions, store repeated actions, or create compelling step-by-step tutorials that walk users through ZBrush as if someone was right there demonstrating the application. ZScript technology is one of the most exciting additions to ZBrush.

Copyright Rhythm & Hues - Still from promotioanl animation for "Golden Eye" by Electronic Arts.

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History

What if a software product could free artists from the constraints of 2D (two dimensional images) while avoiding the complexity and difficulty of 3D (three dimensional images)?

Pixologic Incorporated answered that question by developing a radically innovative graphic software application: **ZBrush**.

The first commercial version of **ZBrush** was available for purchase in December of 1999. The response was phenomenal; customer and review testimonials poured in as do the awards, including both 3D Magazine's Editor's Choice Award and Computer Graphics World's Innovation Award (January, 2000). **ZBrush** appeared before enthusiastic crowds of digital artists at the MacWorld International Expo that July.

ZBrush 1.0 for Windows debuted on August 15th, 2000, with the Macintosh version following in January of 2001. **ZBrush** 1.2 was released at the Game Developers Conference in February. **ZBrush** 1.23 was released on August 20th, 2001, along with a completely rewritten manual. Then, on December 3rd, 2002, **ZBrush** won the prestigious MacWorld Eddy Award for Best Illustration Software.

In 2003, **ZBrush** received Game Developer Magazine's sixth annual Front Line Award for Excellence and Innovation in Tools for Game Development for its utility, innovation, value, and ease of use.

ZBrush received the International 3D Awards' Technological Innovation Award in May, 2004.

"ZBrush is the single best organic 3D modelling system yet invented. [5 out of 5 stars]" - Computer Arts Magazine, July 2004

ZBrush and Pixologic continue to evolve and grow. **ZBrush** version 2.0 unveils powerful new tools in keeping with **ZBrush's** overall goal of opening the universe of digital creation to anyone who dares to dream. After such a great start, what's next? The best is yet to come!

About ZBrush

ZBrush is a 2.5D program that seamlessly blends the best features of a 2D paint program with a 3D modeling and rendering engine, allowing artists, painters, and modelers to create images and scenes with incredible speed and in any artistic style from painted brush strokes to cartoon characters and breathtaking photo realism. **ZBrush's** speed, ease of use, and flexibility frees creativity from technical constraints and encourages both experimentation and artistic growth.

Standard 2D paint functions come alive when mixed with the scene's depth and materials. Illustrations take on true lighting, depth, texture, material, and alpha effects using 2.5D brushes.

Model creatures, props, and more in a matter of minutes, then export these 3D objects for further development. Create organic and mechanical shapes for any purpose. Build maquettes from exported geometry files. Generate low-poly meshes using **ZBrush's** intuitive clay-like modeling to refine the models and build animation morphs. Or, combine **ZBrush's** default, low-poly, fully customizable primitives and export them as geometry files. Easily combine

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3D primitives to create buildings, cars, and more. Sculptors and modelers applaud **ZBrush's** 3D modeling method because it works on their terms with no need to think like a CAD designer to achieve stellar results.

Effortlessly create seamless textures using simple painting techniques and **ZBrush's** scrolling method. Paint using tools that are at once familiar to artists and enhanced by 2.5D format. Lighting setups and modifiers can precisely mimic the lighting in an imported scene, while render options such as fog and adjustable depth cueing complete the illusion of reality. Take texturing into the third dimension by painting directly onto a 3D model with neither distortion nor seams. Use symmetry to apply textures to both sides of an object.

Everything done in **ZBrush** displays while you do it. No wireframes. No test renders to interrupt your creativity, and no lengthy final renders. Simply choose a shape, apply a material, and sculpt or paint. It all comes together right before your eyes with no waiting for the computer to catch up. **ZBrush's** instant response is in a league of its own.

ZBrush is at once a 2D application and a 3D application. By combining commonly used tools in new ways, **ZBrush** eliminates the dimensional gap and invites both hobbyist and professional artists in many disciplines to expand their creative range in ways that are both wondrously new and safely familiar. Painting, modeling, sculpting, and texturing- **ZBrush** blends these seemingly disparate mediums into a single harmonious chorus of 2.5D artistic freedom and power.

Who We're Working With

Pixologic is proud to be working with many leading companies. Here is a very small list of **ZBrush** clients.

- Blizzard Entertainment
- Digital Domain
- Electronic Arts
- Gnomon
- Howard Hughes Medical Institute
- Industrial Light & Magic
- LionHead Studios
- Lucas Film
- Microsoft
- Rhythm & Hues
- Sega
- Sony Computer Entertainment.
- Sony Online Entertainment
- UbiSoft
- University of the Arts
- Weta Digital


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What Weta Digital Says about ZBrush 2.0

*"Pixologic's **ZBrush** was trialed by Weta Digital's modeling department early in our postproduction work on "Lord of the Rings: The Return of the King" and it quickly became one of the key software components of our modeling pipeline."*

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History & Overview (cont'd)

*"The revolutionary nature of **ZBrush** leads to Weta Digital creating a new approach to modeling hero creatures, digital doubles and props for film 3 in the trilogy. Throughout our work on "Lord of the Rings" we have been extracting **displacement** maps from high resolution geometry. For films 1 and 2 we were obliged to use 3D scans of physical maquette to obtain this high resolution geometry, a time consuming and expensive process, because software didn't exist that could sculpt geometric detail to the level required."*

*"Now with **ZBrush** that software is available and in many cases we are replacing the maquette scan with a "digital maquette" that is sculpted on the computer. With support for interactively updating models of up to 4 million faces, we are now able to add details such as muscle and fat definition, skin and cloth wrinkles, and surfaces such as rock, cast iron, and weathered timber."*

"Without the delay and cost of sculpting and scanning a physical maquette we have more time to refine the look of our models, and the software has the necessary flexibility to work in a production environment with changes to art direction and the level of detail required."

Matt Aitken
Digital Models Supervisor
Weta Digital

*"**ZBrush** has dramatically increased the range and quality of what I can produce digitally. Whether I'm using it to build creatures from the ground up or just creating details. Its been a valuable tool to my workflow."*

Dave Cardwell
Lead Character Modeling
Weta Digital.

© Dave Cardwell, Weta Digital

About Weta Digital

Weta Digital was formed in 1993 by a group of young New Zealand filmmakers including Peter Jackson, Jamie Selkirk, Jim Booth, George Port, Tania Rodger and Richard Taylor. The single original computer, located in the back room of an old Wellington house, was leased to accomplish the visual effects shots for Peter Jackson's film, Heavenly Creatures. Since these humble beginnings, the company has quickly increased in size and skill to now provide some of the highest quality visual effects in the film and television industry.

Weta's digital artists use the latest hardware and software, as well as a suite of proprietary tools. Working closely with the other division of Weta Ltd., Weta Workshop, they offer multidisciplinary expertise in conceptualization, creation and technical know-how as well as compositing, blue screen and background plates, miniature stop motion footage, motion capture sequencing, 35mm film scanning, recording and screenings, full design, maquette and 3D scanning services.

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Feature: Comprehensive Modeling Tools

Just as sculptors employ a wide variety of knives, chisels, etc., **ZBrush** includes tools to make modeling easy. Apply radial symmetry and assign up to 100 points. Give a chisel a delicately soft to knife-hard edge. Artists can even add noise to surfaces.

Dozens of deformers twist, bend, inflate, simulate gravity, smooth, and more. Constrain deformations along axes and/or apply masks. Masks are easy yet flexible enough to be applied by alpha channels, mathematical progressions, or painting them directly onto 3D objects. **ZBrush** supports many types of masks including depth and alpha.

2.5D pixols can apply settings to layered objects without manually created masks. Alpha masks can create custom effects, stencils, and even convert 2D objects to 3D in seconds!

ZBrush 2.0's new **ReSym** and **Smart ReSym** tools let you model half of a model and instantly create the entire object, fix mistakes, and more. **ZBrush** modeling has never been better.

Benefit: Obtain Precise Results

ZBrush makes it easy to obtain the exact look desired. Begin with simple shapes and apply modifiers. Starting shapes can use any combination of hand-drawn, and/or primitive shapes.

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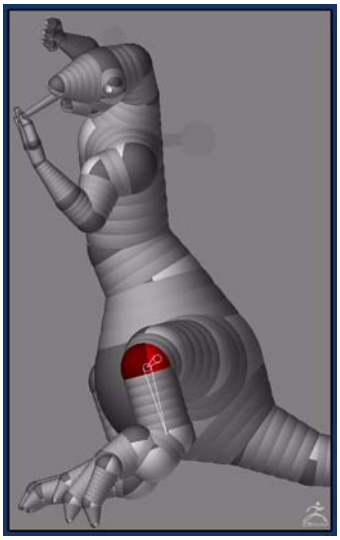
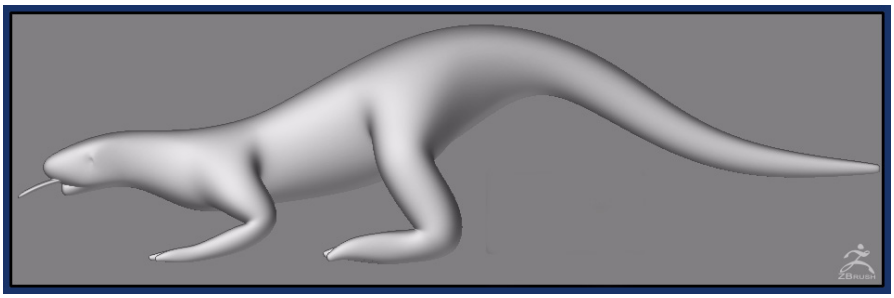
Feature: ZSpheres



ZBrush's revolutionary ZSpheres modeler is an incredibly easy way to create objects. Block out your object's shape using a skeleton-type system of interconnected spheres, then allow **ZBrush** to build a well-ordered mesh surrounding your structure. **ZBrush** 2.0 adds several exciting features that makes this powerful tool even more versatile: ZSpheres are now less sensitive to positioning, making clean mesh creation easier and faster. New lines help determine hierarchies and select specific ZSpheres for editing. Sculpt and texture a ZSphere model in a default pose and freeze it using a morph target, then reposition the ZSpheres to create custom poses. **ZBrush** retains the stored mesh configuration and texture, even if the new arrangement would otherwise result in a recalculated mesh. The addition of front and back hemispheres lets you avoid- or induce- mesh twisting. Magnets give artists even further control over mesh definition. Replace any ZSphere with a 3D object from the **Tool** palette, including parametric and polymesh objects that are treated like any other ZSphere for posing or skinning purposes. The ZSphere preview can be sculpted at multiple resolution levels like any other polymesh.



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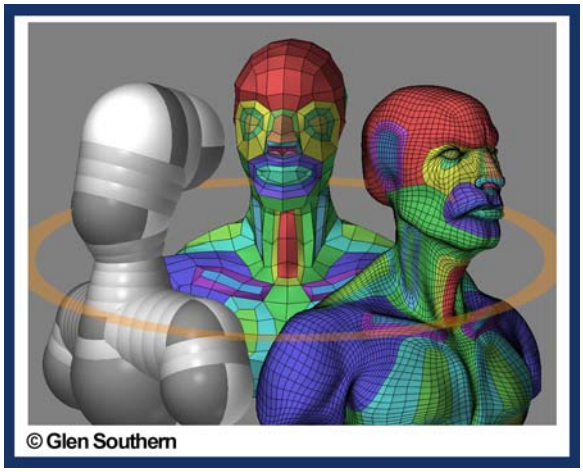
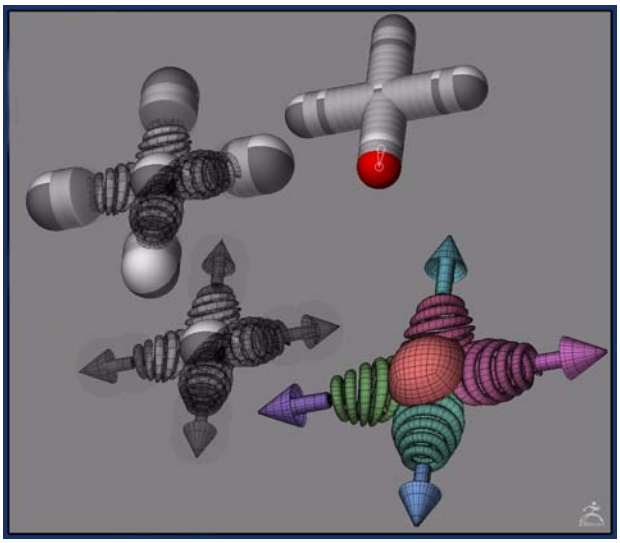
Modeling (cont'd)



Once modeling is complete, a unified or adaptive "skin" creates the final model. Unified skins have higher polygon counts and tighter shapes in a single group suited for refining, texturing, and incorporated into a **ZBrush** scene. Adaptive skins have lower polygon counts ideal for animation and wrap around ZSphere contours like elastic fabric. They feature multiple groups for easy use in other applications and also support "negative" ZSpheres for details like eye sockets.

All ZSphere-created meshes feature beautifully uniform polygon distribution, making further work a snap. They also receive UV coordinates. **ZBrush's** innovative UVTiles process assigns each polygon a square on the texture map, minimizing distortion and creating high-quality textures.

Benefit: Break the 2D Barrier



As any artist will attest, 2D is- well, flat. Need to change an angle or proportion? Start all over again. 3D eliminates this problem, allowing artists to view their work from any angle and distance and to reshape their work at will. The only problem, however, is that 3D modeling normally requires a steep learning curve and complex operations to create a complete model, especially when that model is organic (plants, rocks, animals, people, monsters, etc.). ZSpheres leverage existing 2D skills to enable 3D creativity.

By supporting different skinning methods, **ZBrush** allows artists to define how their ZSpheres will look and respond based on their needs. High polygon count objects are suitable for static renderings, while lower polygon counts are great for animation, game development, etc. ZSphere modeling is highly creative thanks to its ease of use and real-time interactivity. Its versatility lets artists create virtually any organic shape imaginable with gratifying results, truly a revolution in 3D modeling!

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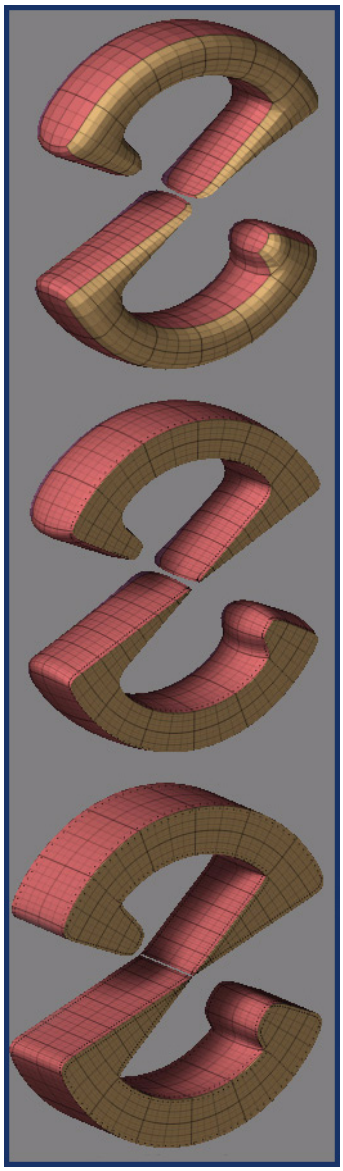
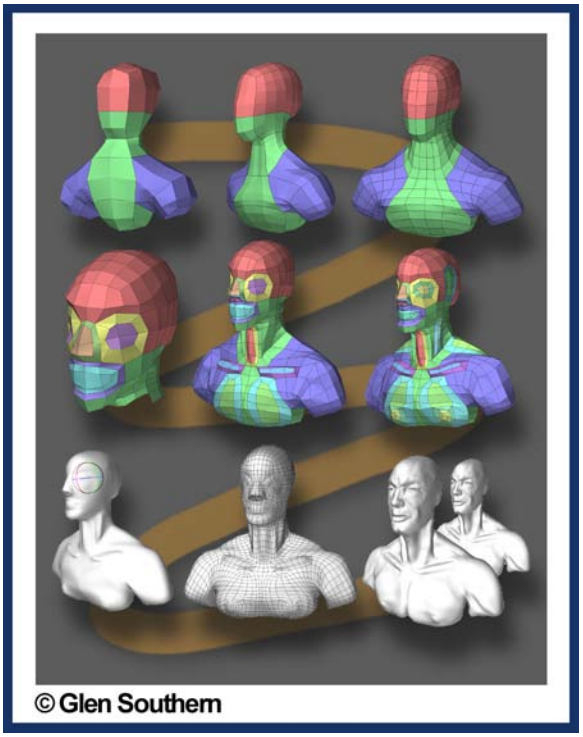
A growing number of production studios are finding that ZSpheres vastly reduce pre-visualization time and enable modelers to pass ready-made meshes to riggers for digital character creation.

Feature: Multi-Resolution Mesh Editing



ZBrush 2.0 offers an entirely new way to sculpt models of all kinds. Subdividing a mesh makes a new resolution level available. **ZBrush** retains the previous subdivision levels, which you can return to at any time. This multi-resolution mesh editing represents an entirely new way to sculpt. Dividing a model quadruples the mesh resolution. This means that you can always work with the number of polygons that are best suited to the type of edits you're making and can switch levels at any time. Changes made at any level propagate across all levels.



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Benefit: Perfect Levels of Detail

Increasing mesh resolution allows you to sculpt fine details. By never forcing you into an arbitrary resolution, **ZBrush** 2.0 flexes with your needs while never giving you a model that is too large or small for your needs. Create a low-resolution model for game play and high-resolution version for cinematic sequences. It's up to you.

Feature: Advanced Geometry Tools

ZBrush 2.0 includes many new features that give you total control over your mesh geometry. New division routines make keeping a high-quality mesh easy. The **Edge Loop** tool allows you to add edge loops to your mesh by creating a ring of polygons around the edge of the visible area. Group and divide these polygons to get crisp edges. Weight polygon edges to control smoothing during division and create crease effects that can be applied to specific subdivision levels for fine control, including hard-to-smooth edge transitions or very sharp edges. The new **Polygroups** controls allows **ZBrush** 2.0 to automatically assign grouping based on mesh topology, UV coordinates, or current visibility. Use this new grouping to control visibility for other functions or in any software package that supports object grouping.

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Benefit: Increased Control for Better Results

Enhanced subdivision routines give you ultimate control over mesh resolution. Creases and edges make adding detail even easier. Grouping lets you work on different portions of the mesh and prepare your object for use in third-party applications that support grouping, such as for creating poseable body parts.

Feature: Sculpting Tools

ZBrush 2.0's new sculpting brushes that bring unprecedented ease to working with meshes. From two dozen to two million polygons, you'll work faster and have even greater control. Each brush retains its own ZIntensity setting, and most brush effects are reversible. The editing cursor is a double circle whose outer ring shows the outer edge of the brush's effect and whose inner ring represents the start of the brush falloff.

Benefit: More Control

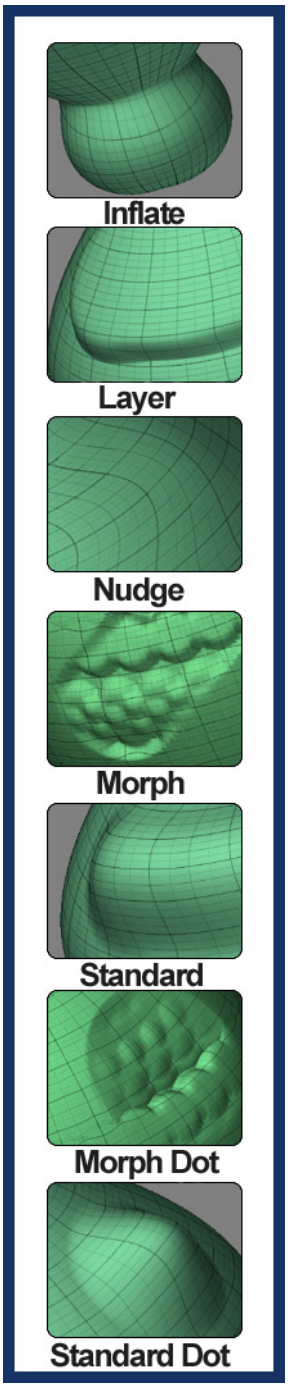
More brushes means more control over your meshes with fewer steps required to achieve the desired effect.

Feature: Symmetry Options

ZBrush 2.0 offers two powerful ways to restore mesh symmetry or create symmetry from a mesh that has been asymmetrically edited. This makes fixing mistakes easy and allow you to sculpt one half of a model and transfer your work to the other side. You can scan a mesh created symmetrically to corrects points misaligned due to accumulated minor calculation differences (**ReSym**), or restore symmetry to a mesh that has been asymmetrically edited (**Smart ReSym**).

Benefit: Save Time

Symmetry lets you create half a model and instantly obtain the other half, thereby shortening the process by up to 50%. You can also fix mistakes applied to one side of the model.



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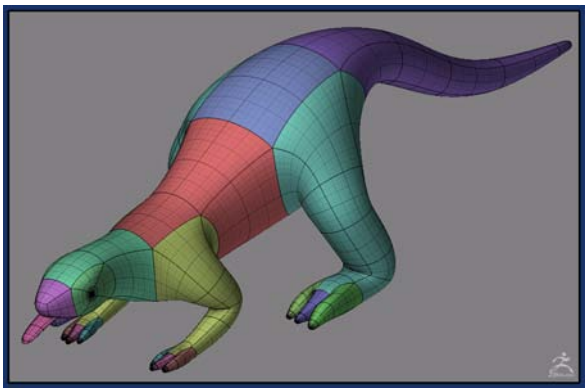
Feature: Polyframe Enhancements



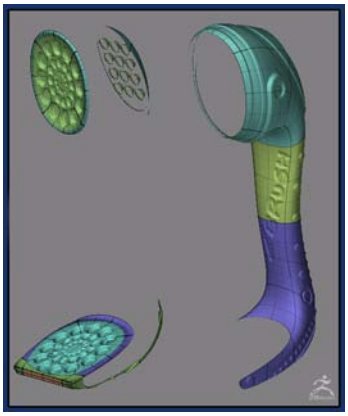
ZBrush's distinctive polyframe display mode allows you to view a model's wireframe superimposed onto the object's shaded surface. Keep track of your mesh's integrity while simultaneously seeing how that structure translates into a 3D object. **ZBrush** 2.0 takes polyframe technology to the next level with several powerful advancements. View mesh groups by assigning a different color or grayscale value to each group. See all resolution levels without clutter and determine the optimum resolution level for editing.

© Marcel Laverdet

Benefit: More Information at your Fingertips

Seeing your polyframe groups and multiple mesh resolutions at once in a clean, clutter-free manner gives you a constant visual overview of your object that lets you visualize how your model will behave under different circumstances (such as groups being used for rigging poseable models or the appropriate resolution for performing edits).

Feature: Partial Mesh Visibility



Hide portions of a mesh for clarity and/or to speed up work with millions of polygons at a time. This feature lets a computer work in real time with a much more complex than it could otherwise process. Hiding portions of the mesh is also useful when working with a complex model, allowing an unobstructed view of the part of the mesh that you wish to edit. This function also serves as an alternative to masking because all geometry functions only affect visible portions of the mesh. The same holds true for deformations and working with Projection Master.

ZBrush 2.0 can automatically assign grouping based on mesh topology, UV coordinates, or current visibility. This new grouping can then control visibility for other functions, or can be used in any other software that supports object grouping.

Benefit: Easier, Faster Work

Hiding unused mesh portions allows a computer to process meshes that are far more complex than normally possible. This feature also gives you an unobstructed view of the part of the mesh that you're editing. As an added benefit, this feature also provides an alternative to masking and helps in grouping.

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Feature: Automatic Difference Map Extraction Displacement Map/Normal Map)

281 polygons, with
16-bit displacement map

ZBrush 2.0 lets artists create both **displacement** and **normal** maps. These rendering techniques allow a low-polygon model to be animated while being rendered as if it had millions of polygons. **ZBrush** 2.0 compares the high-resolution mesh to a lower resolution model and creates a difference map for your rendering engine or animation package, giving you amazing realism.

ZBrush's ability to display a **displacement** map is also useful where lack of disk space makes saving large files impractical.

The **ZBrush** renderer can apply a grayscale image as either a **displacement** or bump map and can also convert the displacements into high-resolution, fully workable geometry. This geometry can be saved and/or converted to a new **displacement** map.

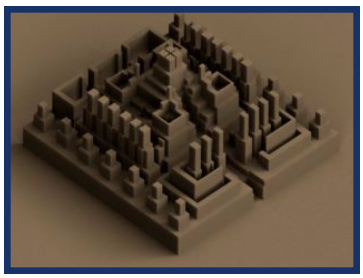
ZBrush reads and writes 16-bit TIFF images (mostly used for high-res alpha/**displacement** maps). It can also generate **normal** maps that function like to bump maps while offering superior depth control. Use global or local coordinates and/or other modifiers to match how your renderer uses map colors.

Benefit: Quickly Create Highly Detailed Maps

Create highly detailed maps for low-polygon models. Convert maps to detailed 3D meshes. **ZBrush** 2.0 blurs the line between 2D and 3D to give you full control over level of detail, polygon count, and more.

Feature: Create 3D Mesh from Alpha

Alpha skinning allows artists to create 3D models using alpha maps. **ZBrush** allows any 2D painting to be used as an alpha. This means that artists can create 3D objects from 2D paintings. For example, an artist could sketch an intricate design, use the Grabber tool to capture the alpha, use the resulting 3D model in an image, create an alpha, and/or export it.



Benefit: Convert 2D to 3D

No more abstract modeling using primitives, curve networks, or other difficult, time-consuming methods. No more separation between painting and modeling. Create 2D paintings and illustrations at any desired level of detail and literally pull them off the page into living 3D models with just a few commands and in just a few seconds. **ZBrush** removes the technical barriers to the 3D experience. No other 2D or 3D application comes close to having this much intuitive power.!

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Feature: Re-skin 3D objects

ZBrush 2.0 doubles the maximum adaptive skin density from 4 to 8., allowing denser skin creation and giving the Adaptive preview tremendous detail. Combined with Multi-Resolution Editing and the posing features, this feature allows you to create, detail, pose, and re-pose figures without creating separate subdivided skins.

ZBrush 2.0 also offers advancements in UV mapping and projection painting. Create UV maps that work well with both quads and triangles with a single button click. Texture your mesh by painting directly onto it, even depth that will be incorporated into the model's geometry as if sculpted.

ZBrush lets you the amount of smoothness when skinning an object from cubes to fully smoothed skinning.

Benefit: Precisely Control Object Appearance

ZBrush's comprehensive suite of skinning methods, tools, and controls gives your models the exact look you want at the exact level of detail required in less time and with less effort than ever before.

Quickly create interesting effects and sharp edges. Create inorganic shapes faster, with less effort and more control than ever.

Feature: ZScript and ZPlugin Technology

ZBrush 2.0 teaches the ZScript text-based scripting language many new tricks. New commands offer script authors greater power, including the ability to create brand new functionality using ZPlugins. Any ZScript can now be converted to a ZPlugin.

ZScript authors have access to a greatly expanded command set. ZScripts/ZPlugins can place new buttons anywhere within the **ZBrush** interface, play WAV files, and more. Insert ZMovies into ZScript buttons. Use memory block commands to precisely control memory usage and perform more complex tasks. The ability to load dynamically linked libraries (DLLs) allows you to create advanced C/C++ plug-ins. You can even use multiple ZPlugins at once.

Benefit: Expand ZBrush Functionality

ZBrush's enhanced Zscript/ZPlugin technology gives you the power to create many new auxiliary features to expand ZBrush in countless ways. The door is now open for third-party developers. Look for many new ZScripts and ZPlugins in the future.

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Feature: Projection Master

ZBrush 2.0's new Projection Master plug-in replaces the previous TextureMaster. This utility saves screen space and provides instant feedback. Projection Master allows you to paint displacements directly onto your dropped high resolution mesh. For example, you can drop a sword and then paint a **Ring3D** and **Sphere3D** onto the hilt to form a gemstone and its mount. Press the **Pick** button to displace the mesh to incorporate what you just painted! Displacement can occur along the surface normal or strictly toward the camera, giving you two new ways to add incredible detail to your mesh: sculpt it using 2.5D and 3D sculpting tools, or paint it using Projection Master, which allows you to embed materials in objects- including baking shaded colors.


© Glen Southern

Take samples from imported textures and shapes. Apply effects to a plane using transparency falloffs that are controlled by any alpha. Use transparent textures as decals or as stencils. Projection Master also includes a double-sided option for symmetry.

These new features work equally well with models that will be used within ZBrush to paint scenes.

Benefit: Texture Creation- And So Much More

Combine Projection Master with the new sculpting brushes, and **ZBrush** 2.0 becomes the best tool for creating **displacement** and **normal** maps! Also, don't forget that these new features work equally well with models that you are going to use directly within **ZBrush** to paint your scenes. Projection Master's incredible effectiveness with ultra-high resolution objects makes it perfect for professional settings that require lots of detail.

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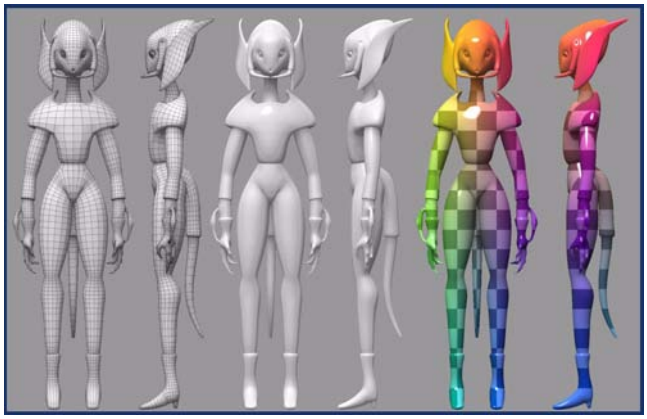
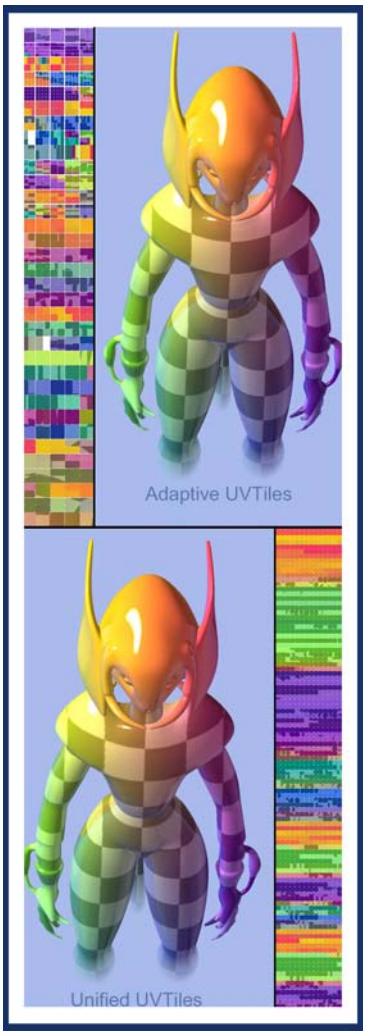
Feature: Automatic UV Mapping



ZBrush 2.0 advances breakthrough UV mapping technology still further by introducing Group UVTiles (GUVTiles). This form of mapping is similar to Adaptive UVTiles (AUV Tiles) in that it offers the lowest distortion mathematically possible in UV mapping. However, instead of unwrapping polygon by polygon, GUVTiles unwraps the model by group. Wherever possible, it keeps polygons in a single group together, only splitting them when necessary to maintain zero distortion. This form of mapping is ideal for any model that has triangles in it, since the unwrapping process will not distort the triangle.



Benefit: Quickly Create Distortion-Free UV Maps

Automatic UV map generation creates the best possible maps as fast and as easily as possible. Create maps by group or by object to suit your project's needs with minimal effort.

Feature: Automatic Checking for Overlapping UV Coordinates

ZBrush does not support overlapping UV coordinates for differential (**displacement** and **normal**) maps. ZBrush 2.0 highlights all overlapping UV coordinates in red. You can choose to correct the problem in an external application or by applying any ZBrush UV mapping option.

Benefit: Proper Map Fit Every Time.

Instantly spot and correct UV map problems with no trial and error required.

Texture To/From Vertex Shading

Vertex shading assigns colors on a per-polygon basis, which limits material detail to the number of polygons in the object. **ZBrush's** texture mapping separates the level of detail from the number of polygons, allowing you to create highly detailed-looking models with few polygons. The ability to transfer textures back and forth between these methods gives you the ultimate in flexibility and compatibility with other applications that use vertex shading.

Benefit: Separate Detail From Polygons

ZBrush does not tie the maximum possible amount of detail to the number of polygons in a model, giving you maximum creative flexibility.

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Feature: Extract Multiple Channels

ZBrush lets you extract multiple channels such as specularity, reflection, and luminosity from a texture using alpha maps. This means that you can convert a single texture map into several maps for even greater control of your object's appearance and/or use in other rendering engines. Best of all, you can concentrate on creating your model's overall appearance without the need to worry about creating individual channels one by one.

Benefit: Create Astounding Materials

Create breathtaking materials without the headache of having to work on a layer-by-layer basis, then export maps that can plug into other rendering engines. **ZBrush** is all about letting you create without worrying about the technicalities!

Feature: Texture Live Update

The new Live Update feature is a huge breakthrough for artists. Apply a texture to a mesh in Edit mode, and you can also open the same texture in another application (such as Adobe® Photoshop®). Save the texture in the other application and it will automatically update on your **ZBrush** model!

Benefit: Real Time Texture Modification

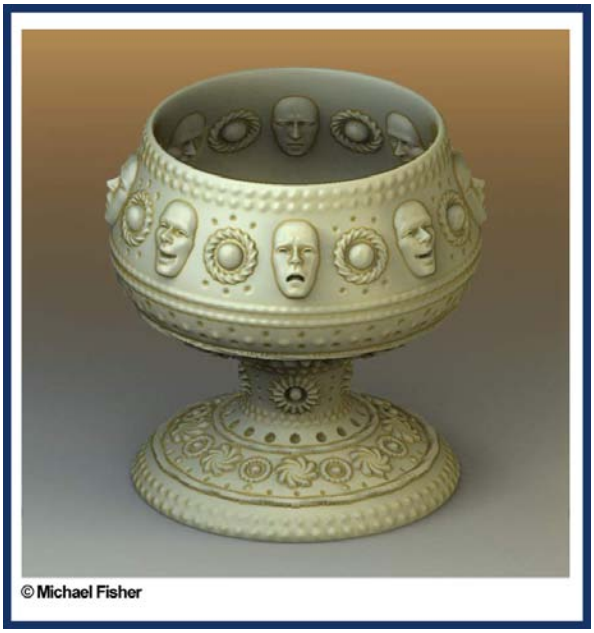
No more reloading textures! **ZBrush** 2.0 shows you the results of your work instantly, which lets you focus on creating, not file management.

Feature: Template Creation

Create instant texture templates. Pressing one button automatically generates a texture that clearly shows your model's UV mapping.

Benefit: Instant, Hassle-Free Map Templates

Get precise maps instantly with a single mouse click so your creative process remains uninterrupted.



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Feature: Pixol Technology

Most 2D application deal with pixels. By contrast, **ZBrush** uses unique "pixol" technology that enables 2.5D painting. Like its 2D relative, a pixol remembers its position and color. It also stores depth, material, lighting, and orientation information, resulting in a painting experience unlike any other.

Pixols allow artists to bring any 2D image into 2.5D. Once the image is imported, **ZBrush** brushes can immediately add 2.5D to give the once-flat image depth that is reactive to lighting and other effects. Artists can convert 2D pixels to 2.5D pixols and even to full 3D models. **ZBrush** seamlessly marries 2D, 2.5D, and 3D in one amazing package!

Benefit: Realistic Object Interaction

Pixol technology adds greater realism with less effort than ever before and makes object positioning and seamless materials automatic. **ZBrush** gives 2D images the depth of 2.5D or even 3D. Artists can create new images and models within **ZBrush**, or can literally add a whole new dimension to their existing work- all in less time than ever before.

Feature: Paint with Color, Depth, and Material

Every **ZBrush** pixol contains information about color, depth, material and orientation. Artists can use any of these factors in any combination, to any degree. **ZBrush's Draw** palette provides total control over brush stroke dimensions, depth of imbedding into the canvas, whether the stroke uses color, depth and/or material, how much color and/or depth is applied, and many more factors. Add specular highlights and lighting effects. Apply brush strokes in dots, dragged alphas, freehand, straight lines, and even styles designed specifically for **ZBrush's** unique 2.5D approach.

Benefit: Bring Imagination to Life

ZBrush gives artists complete control over how they paint. Use any combination of existing or custom materials, textures, brush shapes and objects. If it can be imagined it, **ZBrush** can bring it to life!

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Feature: Unique 2.5D Tools

ZBrush's unique 2.5D tools blur the boundaries between 2D painting and 3D modeling. One favorite, the **Snake Hook** brush, pulls pixols from the canvas out into 3D space, curving and twirling with a mouse or tablet pen. Tentacles, tree branches, and vines are but a few of the many uses for this tool. Another tool, the **Fiber** brush, paints single hairs or many blades of grass with each brush stroke. Modifiers allow even greater control. For example, the **Fiber** tool's modifiers control attributes such as fiber density, thickness, length, randomness, direction, and gravity. **ZBrush** 2.0 incorporates several new sculpting tools, described above under "Feature: Sculpting Tools",

Benefit: 3D Accessibility for 2D Artists

ZBrush gives artists the ability to create in 3D without any special training whatsoever. Users already familiar with a 2D illustration tool will find **ZBrush** amazingly fast and easy to learn, and will soon be creating artwork beyond their wildest dreams.

Feature: Correction Brushes

ZBrush's correction brushes apply color corrections to unshaded (pure) colors. Some of these brushes include the standard smudge, burn, dodge, and other effects used by 2D artists. Many work in the way artists are accustomed to and also have additional features unique to ZBrush.

Benefit: Get Precise Color Results

Adjust unshaded colors as needed to obtain the exact color you need.

Feature: Snapshot 3D Objects

3D models begin life in **ZBrush** as polygons that can be sculpted in 3D to change the model's shape and appearance. Incorporating a model into your scene snapshots it to the canvas, where **ZBrush** converts the polygons to pixols and culls anything not visible to the camera. Discarding non-visible information frees resources for other 3D objects. **ZBrush** only allows one object to be fully 3D at a time, allowing you to work with extremely complex scenes in real-time. Snapshot models are not lost- the snapshot function creates an instance of the affected model with the original remaining in the **Tool** palette. Saved models save as pixols; to save polygons, use the **Tool** palette.

Benefit: Work in Real Time

The ability to move back and forth between polygons and pixols unleashes **ZBrush's** full potential while saving computer resources and allowing you to work in real-time.

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Feature: Assorted Stroke Types

ZBrush 2.0 features the following types of strokes:

- **Grid Array:** Creates a grid using the currently selected alpha or 3D object. For example, you could use this to create a telephone to draw the entire keypad with a single stroke.
- **Radial Array:** Similar to the grid but paints a ring of instances. In our telephone example, this could create the holes for the ear and mouthpiece.
- **Line II:** This stroke handles spacing differently from the original **Line** stroke and allows an alpha to be repeated along the length of the stroke at even intervals.

Benefit: Faster and Easier Object Creation

ZBrush continues its tradition of making complex operations easy.

Feature: Transformable Strokes

You can modify most brush strokes immediately after painting. For example, you can use the **Gyro** to move, scale, or rotate a stroke for precise placement. You can even chain multiple strokes together and modify them as a unit.

Benefit: Modify Strokes Without Re-Painting

Modify many of the elements used to create a stroke, thus redoing your work without actually redoing it. Fine-tune place, position, orientation, etc. This feature is also great for duplicating precise strokes without having to re-paint.

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Feature: Use Alphas to Modify Any Brush Shape

The **Alpha** palette's new **CropAndFill** button paints depth on the canvas based on alpha grayscale values. Control the amount of depth using the new **Alpha Depth Factor** slider. These features let you create custom brushes. **ZBrush** 2.0 stores the currently-selected alpha with any saved tool, allowing you to save your custom brushes. 16-bit alpha support gives you full control.

Benefit: Create Custom ZBrush Tools

The ability to create custom brushes means that you are not constrained by any artificial limitations. Customize your **ZBrush** toolset to your exact needs.

Feature: Stencils

Stencils offer both the same control available from a real-world stencil and much more. Stencils are grayscale images and patterns that mask all painting and modeling actions in variable intensity. A portion at 50% gray, for example, masks the action at 50% intensity. Artists can wrap stencils onto the image's surface with controllable flexibility. Other controls make it easy to move, resize and rotate the stencil. Any alpha image can be used as a stencil.

Benefit: Add Custom Masks

Quickly create and use masks for transparency, materials, shaping, etc. Stencils ensure precise results and greatly speed up the creative process.

Feature: Refraction

ZBrush 2.0 adds refraction to its already impressive list of supported lighting functions. When drawing a 3D object whose RGB Intensity is less than 100%, an artists can add to that object's translucent appearance by simulating the effect of refraction while looking "through" it.

Benefit: Richer Lighting Effects

Create the illusion of translucent objects than "bend" light, such as glass and water using automated tools instead of more difficult manual techniques.

Feature: Perspective Effects

ZBrush lets you apply perspective distortion on either a per-object or global scene basis with a common vanishing point. This makes closer objects appear larger and applies shape distortions based on object size, distance, orientation, etc. from the camera.

Benefit: Add Depth to Your Scene

Quickly turn a flat view into a realistic perspective view.

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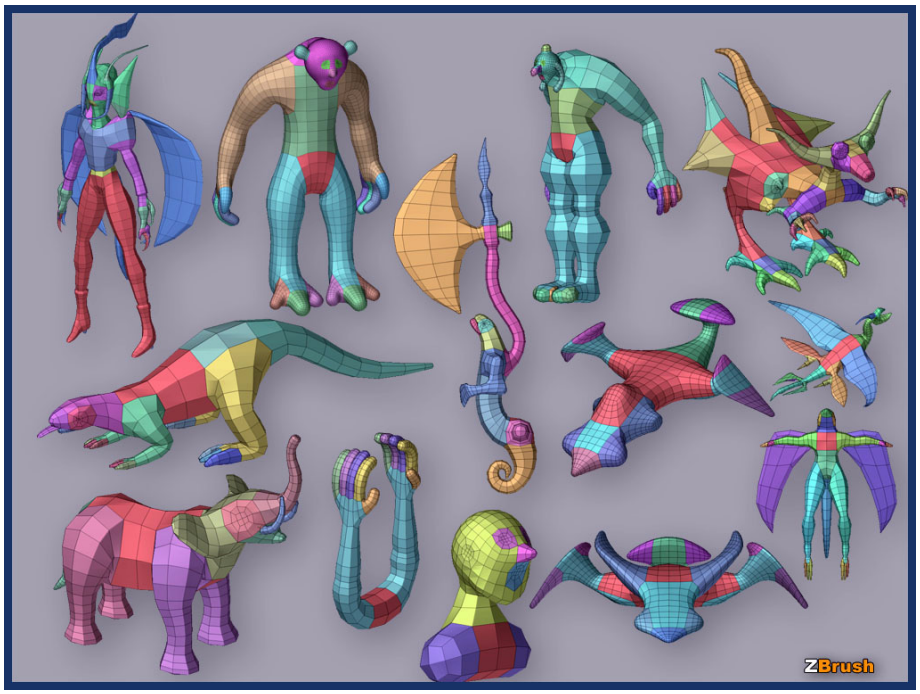
Feature: Layers

ZBrush supports multiple layers for organizational purposes. Each layer covers the entire canvas and exists with other layers in a non-hierarchical environment where one layer is not necessarily in front of or behind another. ZBrush allows you to work on one object at a time, making placing separate objects in different layers not only a workaround but an easy way to keep your scene's components organized and separated.

Benefit: Edit Individual Objects

Saving each object on a different layer gives you greater flexibility and lets you work on multiple objects in the same scene.



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Feature: Color & Material Pickers

Quickly and intuitively sample colors and materials. **ZBrush** can sample color (shaded or unshaded), material, and depth.

Benefit: Speed Up Material Creation and Editing

Pickers greatly speed up color and material selection while reducing work-flow steps.

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Feature: Real-Time Rendering

ZBrush's true real-time operation saves time and allows greater accuracy since each action is always visible immediately, even when working on ultra-high resolution meshes. Preview output can be adjusted to near-final quality and various rendering modes offer maximum flexibility.

Benefit: See Your Work As You Work

Most applications impose a disconnect between the working scene and the final results by forcing artists to create test renders- a repetitive process that is lengthy and tiring. ZBrush's real-time rendering lets artists focus on results instead of on the process. And its ability to do this with ultra-high resolution meshes means that you can push the envelope without sacrificing speed.

Feature: Comprehensive Lighting System

Artists may place individual lights throughout their images and see instant results in the **ZBrush** canvas. Each light has a full suite of custom controls including type (global, spot, etc.), ambient characteristics, shadow strengths, and more. **ZBrush** supports global light maps, which provide a very efficient means of reducing system resources required to light and render a scene. One light map can replace many lights, freeing them for other tasks. Artists can use global light mapping by itself or complement it with additional standard lights. And, some rendering engines create shadows with hard unrealistic edges. By contrast, **ZBrush** creates smooth shadows that mimic nature. You can specify standard or ray-traced shadows when rendering. **ZBrush** 2.0's new unified shadow system provides faster and better ray-traced shadows.

ZBrush supports saving and loading custom light sets into a single file with the extension .ZLI. Reuse light sets and/or share them with other artists!

Benefit: Create Illumination Effects

Lighting allows artists to illuminate their scenes and create highlights, shadows, and other realistic or imaginary effects. By supporting both individual lights and light maps, **ZBrush** once again provides artists with ultimate in flexibility and control.

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Feature: Sophisticated Materials System

ZBrush 2.0's new **Fibers** mode allows individual objects to "grow" fibers at render time to create effects from soft hair to grass, even trees. Apply multiple fiber materials to a scene or object. Transform or pose fibered objects freely; fiber details update to reflect the changes. **ZBrush** materials now include options for changing the properties of cracks, grooves, and holes in object surfaces. Give surface cavities unique color, diffuse, and specular settings. This is especially useful for creating an antique effect, adding dirt or grunge to a scene, and more. Reversed, the cavity mode applies modifiers to a surface's high points.

Copy and paste entire materials for increased flexibility, especially when experimenting with variations on a single material. Each material consists of one to four shader channels, each of which can be copied and pasted into any other channel in the same or a different material.

New anisotropic modifiers give materials a "cat's eye" or brushed metal appearance.

Give materials bump based on an alpha image. Alpha images carry across the entire canvas and can be scaled and tiled as desired. This feature is especially useful for creating textured backgrounds.

Assign any color to the ambient setting.

Benefit: Create Any Imaginable Material

Imagine an object's appearance, and **ZBrush** will let you create it!

Feature: Four Render Modes

ZBrush contains four rendering modes: Best Renderer produces the highest-quality images and is best suited for final renders. Preview Renderer is the default renderer used when working. It shows advanced effects but at reduced quality. Fast Renderer renders basic shading without materials. Flat Renderer is the fastest mode because it renders flat objects with no shading or materials.

Benefit: Save Time Without Sacrificing Results

Faster modes save time while working, freeing resources for scene creation, while slower modes fully show off **ZBrush's** amazing capabilities.

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Feature: Advanced Render Effects

ZBrush supports advanced effects such as depth cueing and fog effects. Depth cueing blurs an image's more distant portions, mimicking a camera's focal points. This is an effective way to draw attention to a single portion of the image. Control depth cueing intensity, softness, near/far depth, and graphically-controlled effect ranges. No 2D application can reproduce depth cueing. **ZBrush's** 2.5D tools make it easy!

Create effects like clouds, smokestacks, mist, haze, etc. Make images look truly environmental and dynamic.

ZBrush contains many other advanced effects. For example, configurable reflection maps and options enable artists to customize reflective materials. Antialiasing adjustments provide clean edges. Even the scene's contrast, brightness and color filters can be non-intrusively adjusted- no need to bring the final image into a photo editor for post-production adjustments!

Benefit: Add Realism and Impact

Create photographic effects, environments, and more to give images added realism and visual impact.

Feature: Antialiased Half Mode

When exporting images, **ZBrush's** algorithms smoothly anti-aliases documents when scaled to exactly half-size.

Benefit: Get Great-Looking Images

Automatically get great-looking images with smooth edges. No further processing required.

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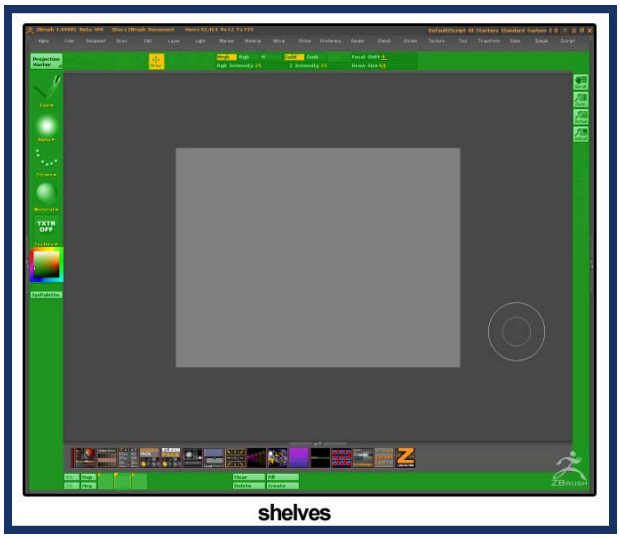
Feature: Document Sizes up to 4096x4096

ZBrush 2.0 lets you create documents up to 4096x4096 pixols, giving your creativity the room it needs to expand. Too little? Too much? Resize and crop your document at any time to suit your needs.

Benefit: Work Large- or Small

The vast 4096x4096 work area lets you create huge models and/or extremely detailed texture and other maps. The ability to resize and crop your work the fly lets you customize your workspace as you see fit.

Feature: Enhanced Interface


shelves

The **ZBrush** interface is more intuitive and faster than ever before. Everything you need is in easy reach and optimized to give more canvas room. Palettes and controls are familiar: existing **ZBrush** artists will recognize the new style.

The new **ZBrush** 2.0 interface has 34% more available canvas space. **ZBrush** works with any resolution 1024x768 or higher- perfect for large displays. New pull-down menus let you access every palette by moving the mouse over the palette's name or icon. Larger controls are easier to see and click. The space around the canvas consists of shelves reserved for customizing your interface. Create custom configurations for different tasks. Working on a long project? Save any document and load it automatically whenever **ZBrush** launches.

Benefit: Work on Your Terms

ZBrush works with artists on their terms, not the program's. Its customizable environment allows each user to create a personalized working environment, thereby enhancing comfort and productivity.

CropAndFill & GrabDoc

Other Enhancements

pull-down palettes

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Other Enhancements (cont'd)

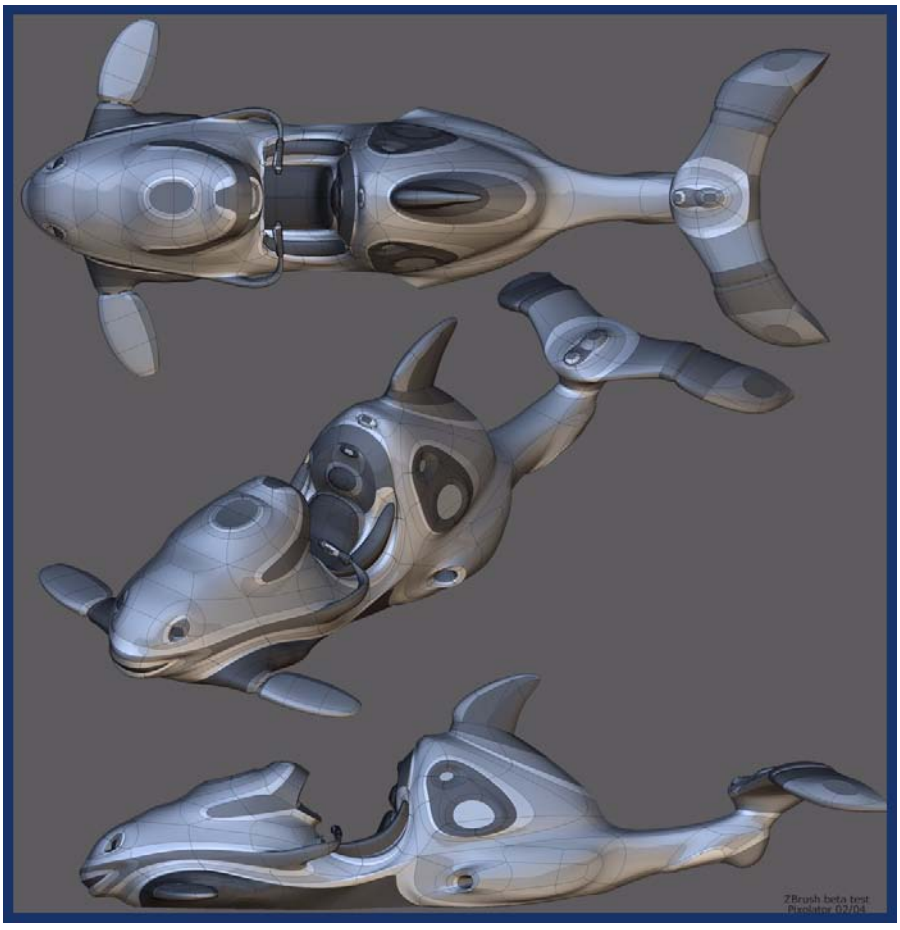
Feature: Import/Export

ZBrush imports and exports 3D mesh objects in OBJ and DXF formats. You can also import and export 2D images in BMP (Windows), PICT (Macintosh), and native Photoshop (PSD) formats. **ZBrush** even supports Photoshop layers!

Imported 3D objects retain their existing UV texture coordinates and vertex counts, which you can reassign and smooth within **ZBrush** without increasing mesh density or losing work performed at higher subdivision levels. Once imported, you can model and deform meshes just like any other 3D primitive. When exporting images, **ZBrush's** algorithms smoothly anti-aliases documents when scaled to exactly half-size. **ZBrush** also allows you to adjust and fix UV seams when importing/exporting maps.

Benefit: Interface with Other Applications

ZBrush's ability to import and export files in standard formats lets you integrate **ZBrush** to your existing toolset in whatever way best suits your needs.



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Feature: Comprehensive Help System

ZBrush 2.0 features a greatly expanded help system with detailed help topics covering nearly every subject. Topics often present a "how-to" approach and are categorized for easy browsing with many illustrated pages, hyperlinks to related subjects, even step-by-step ZScript tutorials. Access help in a pop-up window that gives you answers without interrupting your work. This interactive browser makes learning and finding answers easy and seamless and will be updated regularly in the future. In addition, pressing [CTRL] while hovering the cursor over any interface element accesses context-sensitive help.

Benefit: Find Answers Quickly

While many online help systems force users to search indices and tables of contents to find the information they need, **ZBrush** places answers at artists' fingertips.

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Other Enhancements (cont'd)

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Common Shortcuts

The following common **ZBrush** keyboard shortcuts are presented in Windows (PC) format. Macintosh artists should substitute the [OPTION] key wherever [ALT] appears below. Thus, [ALT]+[A] on a Windows PC becomes [OPTION]+[A] on a Macintosh, and so forth.

In order to make it as easy as possible to find a particular shortcut, the following list is laid out by palette name.

- Alpha palette ([ALT]+[A])
- Color palette ([ALT]+[Z])
  -[C]: Selects whatever color is under the cursor
  -[CTRL]+[F]: Fills layer with currently selected color
  -[V]: Swaps the foreground and background colors
- Document palette ([ALT]+[O])
  -[CTRL]+[O]: Open a document
  -[CTRL]+[S]: Saves the document
- Draw palette ([ALT]+[D])
  -[D]: Brings up Depth slider at cursor location
  -[I]: RGB Intensity slider appears at cursor location
  -[SHIFT]+[I]: Z Intensity slider appears at cursor location
  -[L]: Lock RGB and Z Intensity sliders
  -[S]: Brings up Draw Size slider at cursor location
  -[ALT]: While held down, toggles between Zadd and ZSub
- Edit Palette ([ALT]+[E])
  -[CTRL]+[Z]: Undo
  -[CTRL]+[SHIFT]+[Z]: Redo

These two functions are based on the mode that the user is in. If Transform>Edit Object is active, they will undo or redo the last change to the model. If inactive, then they will undo or redo the last change to the canvas. Some changes, however, cannot be undone.)

- **Layer** palette ([ALT]+[Y])
  -[CTRL]+[N]: Clears the active layer
  -[CTRL]+[F]: Fills the active layer with the currently selected material and color or texture
  -[CTRL]+[B]: Bakes the layer shading
  -[SHIFT]+Click: On any layer, toggles all layers on or off
  -[~]+Click: Selects the layer on which the clicked pixol resides
  -[~]+Drag: Moves the layer contents (same as **Layer>Displace H** and **Layer>Displace V**)
  -[~]+[ALT]+Drag: Moves the layer content depth (same as **Layer>Displace Z**)
- **Light** palette ([ALT]+[L])
- **Marker** palette ([ALT]+[K])
- **Material** palette ([ALT]+[M])
- **Movie** palette ([ALT]+[V])
  -[CTRL]+[SHIFT]+[G]: Brings up the **Grab Frame** slider at cursor position
  -[CTRL]+[SHIFT]+[O]: Starts continuous recording
  -[CTRL]+[SHIFT]+[P]: Plays ZMovie

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-[CTRL]+[SHIFT]+[W]: Select a window

-[CTRL]+[SHIFT]+[!]: Records a single frame

- **Picker** palette ([ALT]+[I])
- **Preferences** palette ([ALT]+[P])

  -[F]: Quick 3D edit

  -[SHIFT]+[F]: **Polyframe** mode

  -[CTRL]: When **Popup Info** is turned on, shows more detailed descriptions

  -[CTRL]+Click: Removes the selected item from the **Float** menu

  -[CTRL]+Drag: Pull an item from the interface into the **Float** menu. Items can be docked with other items or left floating separately

  -[CTRL]={SHIFT]+[I]: Store interface configuration

  -[TAB]: Toggles **Float** menu on and off
- **Render** palette ([ALT]+[R])

  -[CTRL]+[R]: Render area around cursor

  -[CTRL]+[SHIFT]+[R]: Render all
- **Stencil** palette ([ALT]+[N])

  -[ALT]+[H]: Turns **Stencil** on/off

  -[CTRL]+[H]: Hide/show stencil

  -[SPACE]: Open **Coin Controller** at cursor position
- **Stroke** palette ([ALT]+[S])

  -[CTRL]+[1]: Replay last stroke

  -[CTRL]+[2]: Replay all strokes

  -[CTRL]+[3]: Record brush strokes
- **Tablet** palette ([ALT]+[B])
- **Texture** palette ([ALT]+[X])
- **Tool** palette ([ALT]+[T])

  -[CTRL]+[SHIFT]+[T]: Save the active tool
- **Transform** palette ([ALT]+[F])

  -[D]: Go up 1 subdivision level

  -[SHIFT]+[D]: Go down 1 subdivision level

  -[E]: Scale

  -[Q]: Draw pointer

  -[R]: Rotate

  -[T]: Edit object

  -[W]: Move

(Note that the above shortcuts can work together. For example, when **Edit Object** is not active, [W] opens the **Move** gyro. When **Edit Object** is active, [W] enters **Edit>Move** mode.)

-[M]: Create a marker

-[CTRL]+[M]: Remove a marker

-[X]: X symmetry

-[Y]: Y symmetry

-[Z]: z symmetry

Common Shortcuts (cont'd)

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Common Shortcuts (cont'd)

-[CTRL]: When **Edit Object** is active, hold down to paint a mask on the object

-[CTRL]+[G}: 3D copy

-[SHIFT]: Constrains object rotation when in **Rotate** or **Edit Object** mode

-[SHIFT]+[S]: Snapshot the current object

-[CTRL]+[SHIFT]: Combine with click or drag to control partial mesh visibility.

- **Zoom** palette ([ALT]+[W])

-[0]: View actual size

-[+]: Zoom in

-[-]: Zoom out

-[CTRL]+[0]: Half-sized, antialiased view. After doing a best render, use this before exporting to save an antialiased image.

-[SPACE]+Drag: Pans the canvas

- **ZScript** palette ([ALT]+[Z])

-[H]: Show/Hide **ZScript** window

-[CTRL]+[U]: Reload a ZScript

-[CTRL]+[SHIFT]+[L]: Load a ZScript

-[LT ARROW]: Load last ZScript

-[RT ARROW]: Load next ZScript (only works if you have used Left Arrow)

-[UP ARROW]: Scroll ZScript up

-[DN ARROW]: Scroll ZScript down

-[ESC]: Halt ZScript execution

- Special

-[SPACE]: Brings up **QuickMenu** at cursor location

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Awards

Here are just a few of the many awards **ZBrush** continues to receive for its ongoing innovation, power, and ease of use. Please visit http://www.pixologic.com/news/contents.html to see all of our awards and reviews.

- **Computer Arts Magazine, July 2004: ZBrush** from Pixologic has been around for a few years now, but it remains a remarkable graphics program that really has no equal– or even poor copy, for that matter. Version 2 introduces more 3D tools and features to the already impressive set, making the tool evenly split between a 2.5D painting program and full 3D modelling application. In working practice though, it's both, because many of the workflows in **ZBrush** make use of the 2.5D canvas and the polygon models. **ZBrush** 2 is a stunning 3D modelling package, and should be on every character artist's list of products to buy... It sets a standard for high-detail polygon modelling.

- **International 3D Awards:** Technological Innovation Award, May 2004: The Best Technological Innovation in 3D award is for a technology that has proven itself in advancing the realm of 3D animation, gaming or digital visual effects.

- **Game Developer Magazine, January 2004: ZBrush** 1.55b received Game Developer Magazine's sixth annual Front Line Award for Excellence and Innovation in Tools for Game Development. Selected by a panel of industry-leading game developers, **ZBrush** 1.5 receives this award in the art category based on criteria such as utility, innovation, value, and ease of use.

- **Macworld (Winner, Eddy Award for Best Illustration Software), November 2001:** The Eddy Awards, the Macintosh industry's highest distinction for breakthrough product development and technological innovation, are given to products in many categories, honoring the top software and hardware products for business, dynamic media, video, web, publishing, graphics and developer tools. Macworld's editors surveyed every Mac product released between November 1, 2000, and November 1, 2001, to determine our nominees and winners in each category. We recognize these products not only for their overall quality but also for their creators' willingness to lead us in new directions. These are the products that will inspire the next millennium...

Industry Recognition

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Industry Recognition (cont'd)

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- **Macworld, June 2001:** No matter how much graphics experience you have, odds are you've never seen anything quite like **ZBrush** 1.1. Part 3-D modeler and renderer, part paint program, this unique application lets you easily create complex images with sophisticated color and lighting effects.
- **Macworld Expo, July 2000:** Macweek.com awarded **ZBrush** Best of Show at Macworld Expo in New York. The show was a tremendous success as we exhibited ZBrush to enthusiastic crowds of digital artists from around the world.

Other awards **ZBrush** has won include:

- **3D Magazine, November 1999:** *"The ultimate expression of 2D/3D convergence ... was the debut of Pixologic **ZBrush**."*
- **Mensa International Journal, "Smart Software," December 1999:** *"It is fun, easy to use and a great tool for artists."*
- **Computer Graphics World, 1999 Innovation Award, January 2000:** *"...create 3D content without calculations, wireframes, or NURBS."*
- **Computer Graphics World, "Spotlight Products," January 2000:** *"**ZBrush** could be the texture-painting product for the videogame industry."*
- **3D Magazine, Editor's Choice: Promising Beta Award, January 2000:** *"It's the freshest concept to come along in quite a while."*
- **CHIP Magazine (Czech Republic), Chip Tip Award, April 2000:** *"...unexpected visual effects, unattainable by other programs."*
- **Computer Arts (Great Britain), April 2000:** "***ZBrush** is an excellent application, that will be of interest to professionals and hobbyists alike."*
- **Computer Graphics World, "Fresh Paint," April 2000:** *"2D artists can create 3D looks without techno mumbo jumbo."*
- **Design Graphics, April 2000:** *"Even when painting complex structures like 3D pixol hair, I could not slow **ZBrush** down."*
- **The Internet Eye Magazine, Editor's Choice Award, June 2000:** "*If the beta is any indication of what's to come, this is a must have in your 3D Art kit."*
- **Mensa International Journal, "Smart Software," November/December 2000:** *"In a short while you will realize you can't live without this program."*

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