

Aquafied: Understanding And Designing Aqua Icons

Lauri Kiekki - lauri@pixelcentric.net

A Desktop Revolution

The release of Mac OS X brought with it a completely new breed of desktop icons. System 7 had given us easy customization with 256 color icons. Mac OS 8.5 gave us 8-bit alphas and full-color icons. But Mac OS X's thumbnail (128x128) icons are a much larger leap.

In some respects it is a leap some would not like to take. Gone are the days of pushing individual pixels in ResEdit, as the tool of choice for most is now either Illustrator or Photoshop. Some might even go as far as to say that the era of friendly, warm and 100% hand-made icons has ended. But on the other hand Aqua allows icons to be crystal-clear and big enough even on huge monitors. Thanks to Apple's efforts on the Aqua Human Interface Guidelines, Aqua icons used in software applications are typically more consistent with the whole Mac OS X experience than the equivalent System 7 or Mac OS 8/9 creations. The result is a visually consistent user experience.

Creating Mac OS X icons presents a much greater challenge than the 32x32 pixelations in the operating systems of yore. The canvas is now much larger than it used to be, yet at the same time the level of detail should be much greater, while still making sure that icons look good even at lower resolutions – even at 16x16 size. And therein lies the greatest challenge of all. Since Aqua can present an icon at any size between 16x16 and 128x128, icon artists are not designing for 128x128, nor for 16x16, or any other size between these extremes. Iconists must design for all of these sizes at the same time, through the same piece of artwork. In this article we will be covering the philosophies and concepts that an artist must understand to produce clean, impressive and understandable Mac OS X Aqua icons.

The Basics

The basis for any Aqua icon is its shape, first and foremost. Differences in color and detail are always secondary to the icon's silhouette. Application icons (Figure 1.A) are generally rectangles that have been rotated slightly counterclockwise. They usually contain some sort of identifier (usually a tool, such as a pen or a paintbrush) that lets the user know what kind of an application it is. Application icons should always convey a message of what happens when they are opened. Using a product logo as an icon, for instance, is usually a bad choice.

Document icons (Figure 1.B) are usually similar to their host application's icon in color and certain details, but the overall shape should always be that of a sheet of paper whose top right corner has been folded slightly. If the host application's icon contains a tool or an identifier (such as TextEdit's pen or Preview's magnifying lens), that identifier should be omitted in the document icon to avoid risk of the user confusing the document icon with the host application's icon. If a document icon contains a badge such as a file type identifier, it should be completely inside the sheet of paper that the document icon consists of (see Figure 1.B for a good example, and Figure 3.A for a bad example).



Figure 1.A - Application icons



Figure 1.B - Document icons

Toolbar icons should rely even more on the primitive shapes upon which they have been designed. A row of icons can look quite puzzling if the basic shape for the icons is the same. This is why it is generally a bad idea to have a round stop sign icon and a round refresh arrow in a browser toolbar, for example. For this reason Apple has designed the Mac OS X Finder toolbar icons (Figure 2.A) based on distinct shapes. The Computer icon is a rectangle, the Applications icon is a house, the Delete button is a circle, etc. Even if they had the same color scheme, they would still be easily identifiable – whereas the icons in, for example, the Mac OS X browser Chimera (Figure 2.B) lack a similar level of distinctness.



Figure 2.A - Finder's Toolbar



Figure 2.B - Chimera's Toolbar

Style

The general style of an Aqua icon is also important. Finder icons should be almost photo-realistic, but not quite. In no circumstances should they be scaled-down photographs. Also, while Aqua icons are 3D, they are not overly so, in order to let the basic shape of the icon shine through. The perspective from which 3D objects in Aqua should be rendered is directly from the front and slightly above, as if the viewer was looking at an object on a table in front of him or her.

Toolbar icons, on the other hand, should be simpler and quite flat pieces of artwork. Shading aside, 3D effects should not be mixed with toolbar icons in any context. The perspective for all toolbar icons should be straight-on from the front (or directly above, if applicable). The perspective for utility application icons (such as the Terminal or the Network Utility) is also straight-on.

It's also important to note that the Mac OS X way of shading icons differs greatly from the traditional Mac OS style. Whereas Mac OS 9 icons are shaded by a single (imaginary) light source in the top left corner of the screen, the light source for Mac OS X icons should be from directly above (in other words, coming in at a 90-degree angle). The shadow should fall behind the icon, not to its side (see Figure 3.A for an example

on bad shading).



Figure 3.A - Internet Explorer Document - Don't do this

It is generally a bad idea to pursue an icon style similar to the Aqua window control widgets and push buttons. Not only has the style been done to death, Aqua jewels also lack distinctness, since the system is filled with them. Using shapes similar to Aqua interface elements can also cause confusion for the end-user.

When used correctly, the jewel look can make an icon look more appealing and impressive. When used badly, the effect can make your icon get lost in the sea of Aqua jewel buttons already out there. Typically, transparency and glossy highlights should be left out of the design unless they can be used convincingly to convey meaning (see the magnifying lens in the Preview application icon in Figure 1.A for an example).



Figure 3.B - Don't do this, either

Graceful Degradation

One of the key design concepts when creating Mac OS X icons for use in the file browser is to make an icon lose detail as it shrinks. This isn't as simple as it sounds, since you can't really tell the icon what to drop at small sizes, other than by creating certain bits of detail in such a way that when scaled, they fade into the rest of the icon. At that point the overall shape and color of the icon and its various parts become more important than the tiny details that might be quite visible at 128x128. A good example is the TextEdit icon, which contains a block of text. The text doesn't disappear at the smaller size, but it becomes less distinct – but the basic appearance of a letter with a pen on top is still recognizable.



TextEdit and receding detail

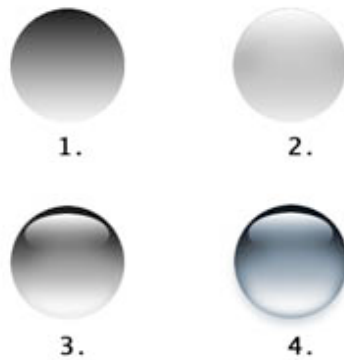
Take a Hint

An important element of each Mac OS X Finder icon is the bundle of hint icons in addition to a 128x128

icon resource. Hint icons exist in three flavours: 16x16, 32x32 and 48x48. If these sizes exist within an icon and the icon is displayed at one of these sizes or a size close to them, the Finder uses them instead of scaling the 128x128 icon down. This technique, combined with Graceful Degradation, is a great way to create highly detailed 128x128 icons that still look good and clear at smaller sizes. However, it is important to note that some Mac OS X user interface elements, such as the Dock, ignore hint icons.

If You Build It, They Will Come

For an example on how to build a Mac OS X icon, we will use the traditional jewel button. Even though it shouldn't be considered a good example on an actual icon, it does showcase a few easy methods of adding Aqua style effects such as shading and gloss that can be seen in other types of icons. This simple tutorial assumes that your editor of choice is Photoshop, but the same general principles apply in other applications as well. It is a good idea to work with a canvas of at least 256x256 pixels and scale the image down to 128x128 when finished.



1. Make an empty layer. Start with your basic shape – in this case, an oval. Make a subtle gradient from dark grey to light grey, starting from the top of the shape.
2. Make a new layer. Load the previous layer as a selection. Make a gradient from white to transparent, starting from the top and ending near the bottom.
3. Scale the white-to-transparent gradient and move it a few pixels downward from the top of the round shape. Duplicate this highlight and move the highlight copy to the bottom. Apply some Gaussian Blur to it.
4. Switch back to the original shape layer. Add Inner Glow with an opacity of 70 %, using a medium grey color and the blend mode Multiply. Increase the glow size until it forms a shadow around the inside of the button. Also add a subtle drop shadow, with a light source at 90°.

Finally, add color with the Hue & Saturation dialog.

Checklist

- Even if you want the final icon to look like a photograph, work with an illustration or a sketch rather than a photo.
- Design with simplicity in mind. Start with a distinct basic shape, and stick with it. Have the icon clearly depict the effects of clicking or double-clicking the icon. Bear in mind that

cultural differences can make a certain visual element harder to understand for some people.

- If you are making a Finder icon, use subtle 3D effects and gradients. If you are designing a toolbar icon, make it 2D instead.
- Use transparency and color to help the icon convey its message. Don't add transparency, glossy effects or splashes of color just for the sake of flashy appearances. Avoid extraneous color in utility application icons – make them look more serious and predominantly grey instead.
- Don't use Aqua interface elements or copyrighted material in your designs.
- Design Finder icons for all sizes, not just 32x32 or 128x128. Use hint icons and graceful degradation to make icons sharper at small sizes.