IconBuilder xp
Tutorial

A Step-by- Step Guide to Building Traditional
& Modern Windows Icons

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An Introduction

This step-by-step guide assumes that you have read the IconBuilder User's Guide and have a good understanding of the filter's interface and controls. If you have not read the User's Guide or are a beginner to IconBuilder, we recommend that you go back at this time and look over the User's Guide before proceeding with this tutorial.

Every icon has to start somewhere and with IconBuilder that means creating individual layers in Adobe Photoshop to use as a launching pad for the filter. Depending upon how you like to organize your work, you can either create Photoshop files that are sized to your exact needs (32x32 for example) or you can create a Photoshop file that is large enough to contain all the various resource sizes at once. This latter example is the method we will be using for this tutorial.

We've created a base file for use with IconBuilder that contains the various size templates pre-formatted for you. The file can be found along with this PDF document in the "IconBuilder Tutorial" folder of the main IconBuilder download. Open this file with your copy of Photoshop before proceeding with this tutorial. When you have completed this tutorial, you can delete the example layers and use the leftover template layer as the base for your own icon building.

This tutorial is separated into two main parts. The first section demonstrates how to build a traditional (95, 98, NT, 2000) Windows icon, and the second gives steps on building an icon for the Windows XP operating system that makes special use of some cool transparent effects. Both sections show slightly different ways to achieve similar results, so you should read them both get a better understanding of how the filter works.

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Icon Builder Tip - How you decide to create the base art for your icon is up to you. Simply drawing in Photoshop with the pencil tool or paintbrush works well enough. For these examples however, both Smiley and the Ghost were created as vector artwork in Macromedia Freehand, rasterized into Photoshop at various sizes and cropped to the appropriate sizes for placement in the template file.
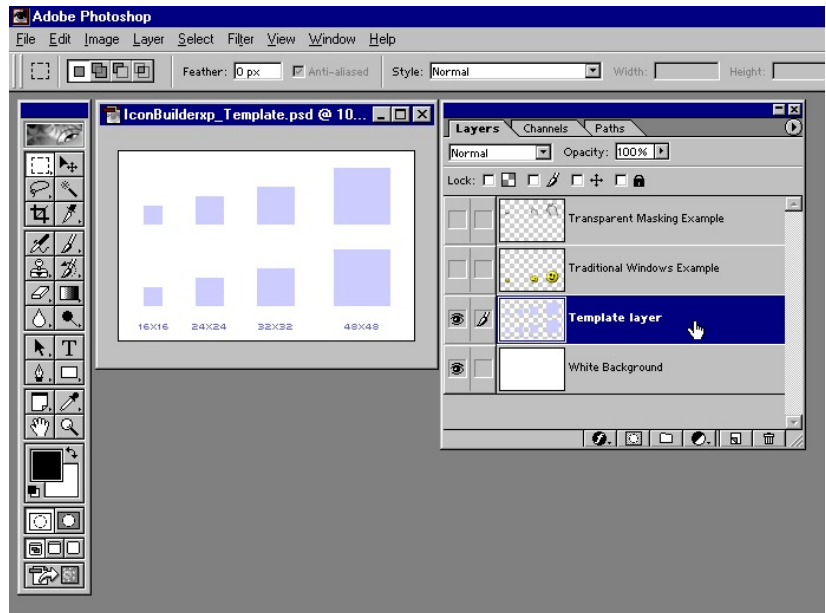

1-a) Open the IconBuilderxp_Template.psd file from the tutorial folder. This file has several icon resources pre-formatted and ready to be built into icons. The template layer that is visible contains 16x16, 32x32, and 48x48 pre-sized areas for icon placement.
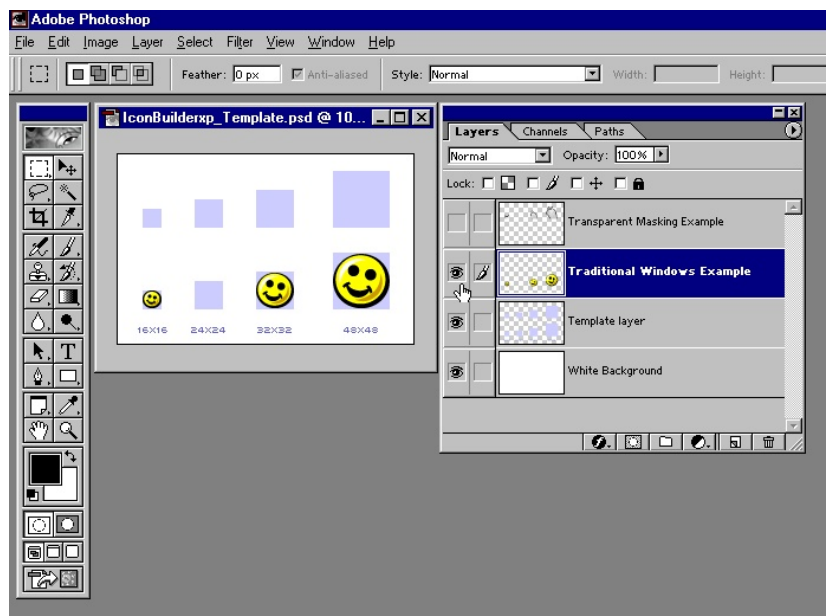

1-b) Make sure that the "Traditional Windows Example" layer is visible and selected from the Layers window. This transparent layer contains image data cropped to the correct sizes. Most Windows icons require three sizes to be built into them, 16x16 pixels, 32x32 pixels, and 48x48 pixels. You'll note that we provide you with a 24x24 pixel template as well, although we won't be using that size in this tutorial.
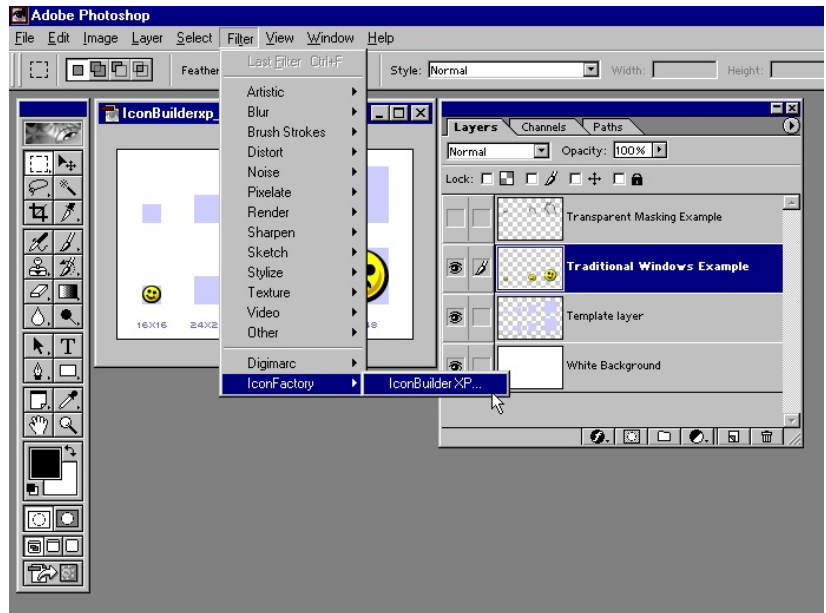
2) To launch the IconBuilder filter and begin building icons, do the following:
Select Filter > Iconfactory > IconBuilder XP

Adding Resources
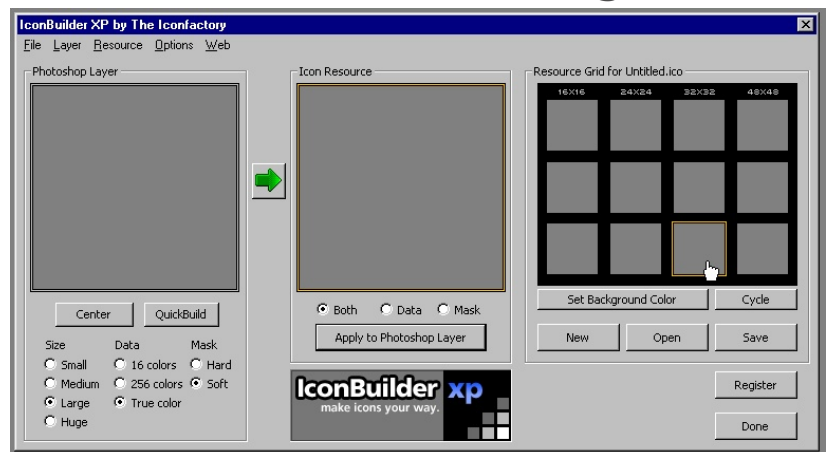
3-a) Click the 32x32, 32-bit cell in the resource grid to select it. Next, place the cursor in the large window on the left (the Photoshop Layer Window), click and drag the cursor up until the 32x32 version of the icon is visible and centered in the window.

If the smiley face in the left-most window doesn't fill the entire box, then you're viewing the 16x16 pixel version and you need to click and drag to the left. If the smiley face is too large and won't fit inside the left-most box, you're viewing the 48x48 version and you need to click and drag to the right a bit. You'll know if you are looking at the 32x32 pixel version if the smiley face fits right inside the left-most box. Also, keep in mind that if the Num Lock key is pressed, you can then use the arrows on the numeric keypad to nudge the layer in any direction.
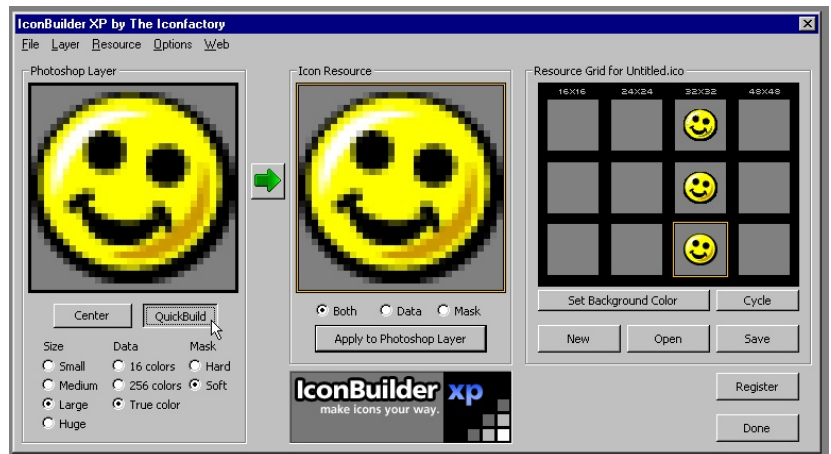
3-b) While holding the Shift key down, click on the QuickBuild button to instantly add all of the 32x32 versions of the icon to the resource grid. Holding Shift will always add columns (sizes) of data, and holding Control adds rows (bit-depths) of data.

IconBuilder Tip - Use the Cycle button under the resource grid to see how your icon will hold up against a variety of desktop colors.
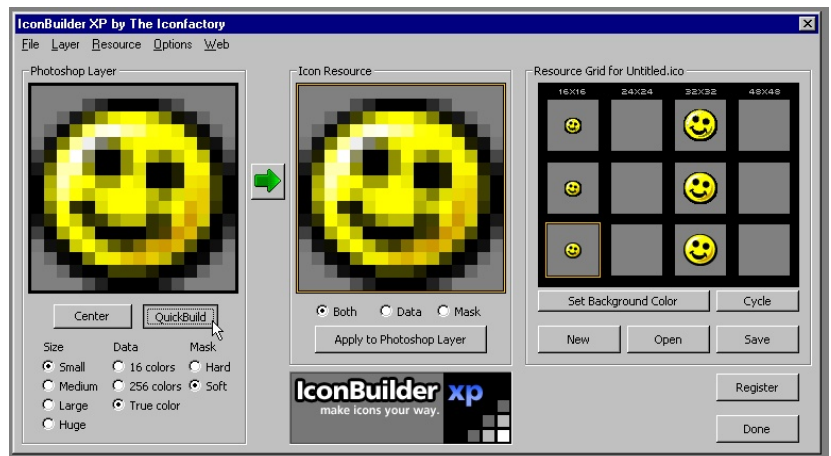

3-c) Click and select the 16x16, 32-bit cell. Next, click and drag the cursor in the Photoshop Layer Window up and slightly to the left until the 16x16 version of the icon is visible and centered in the window. Once again hold the Shift key and press QuickBuild to add all of the 16x16 resources to the icon.

Icon Builder Tip - There is a display bug in certain versions of Windows NT and Windows 2000 that will keep your icon from displaying properly if it contains the 4-bit (16 color), 48x48 resource. For maximum compatibility, we recommend clearing this particular resource from all of your icons prior to saving. In addition, no desktop icon should contain any resources in the 24x24 column. This column is provided for special circumstances when programmers might need versions of the icon for the Windows Start Menu. We recommend you DO NOT build any resources into the 24x24 column.
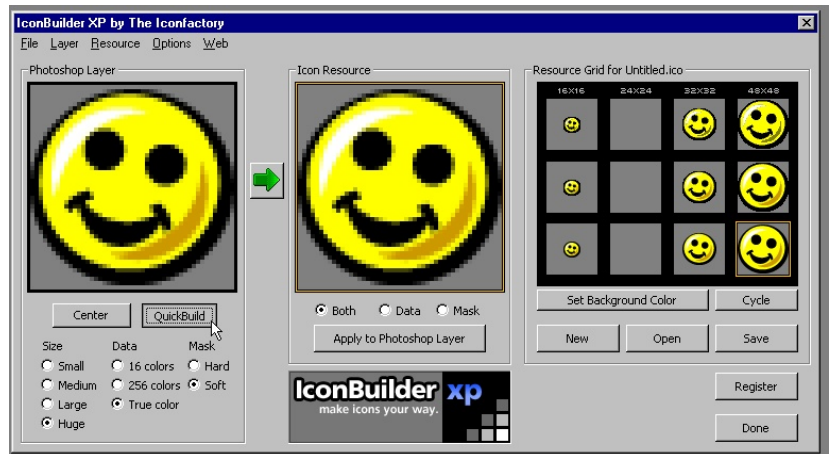
4-a) Lastly, click on the 32-bit 48x48 grid cell to select it. Next, click in the Photoshop Layer window once again and drag your cursor to the left until the 48x48 pixel version of the Smiley face is visible and centered in the window. Once again hold the Shift key and press QuickBuild to add all of the 48x48 resources to the icon. With this done, all of the necessary resources have been added.

NOTE: Read the important builder tip to the left and the following step below about how to avoid possible display errors in Windows NT and Windows 2000 prior to saving your icon.
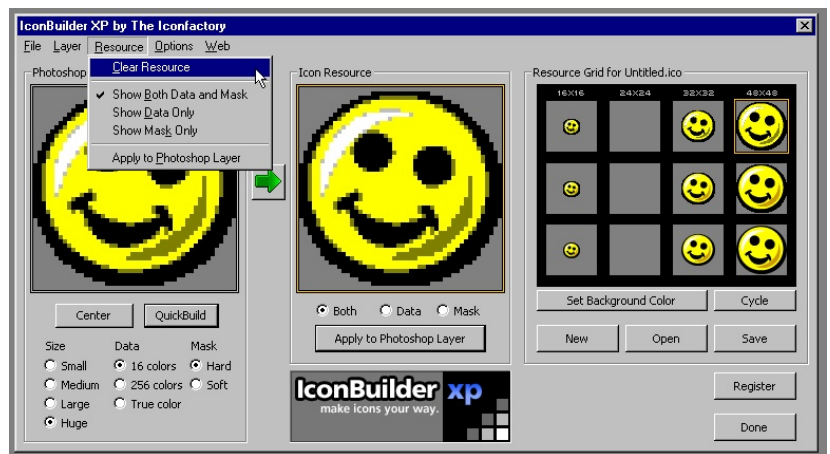
3-b) Click on the 4-bit, 48x48 grid cell (upper right most cell) to select it.Click on the Resource Menu and select Clear Resource to remove this particular resource from the .ico file.

If you don't clear this resource, the icon will not display properly on certain versions of Windows. For maximum compatibility, we recommend you omit this size and bit-depth from every icon you plan on creating with IconBuilder. The same also goes for the 24x24 resource column. This column should only be used by designers or programmers that need these specific resources for the Windows Start Menu.If you include any 24x24 resource, the icon won't display properly on Windows 98 and Windows 2000.
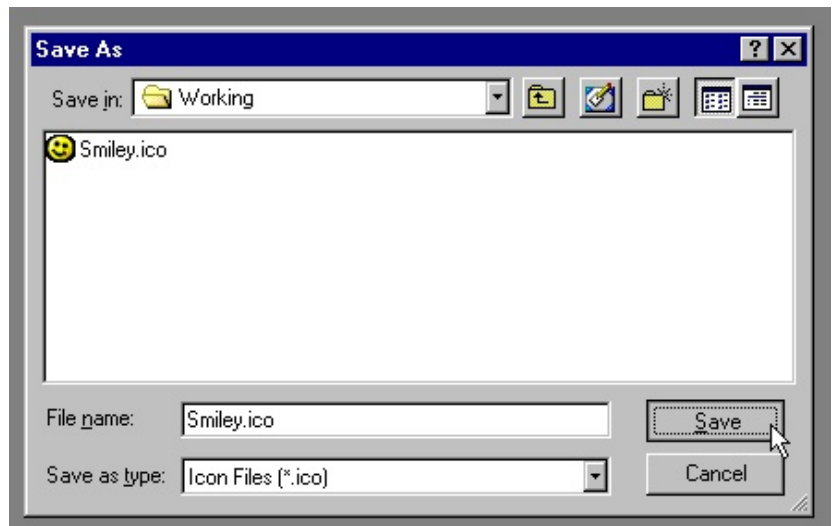
4-c) To save the icon file, simply click on the Save button, name the file and say Save. Be sure to leave the .ico file extension when naming the file. This lets Windows know that it is indeed an icon file and therefore should display as such on the desktop.

Once saved, if you do not see the icon on the desktop, and instead you see a generic document icon, this means there has been a resource saved into the file that Windows is having trouble displaying. Try opening the .ico file inside IconBuilder and manually clearing each of the 24x24 grid cells. Re-save the file and see if this corrects the problem.

Congratulations!

You've just constructed your first Windows icon with IconBuilder! The more you work with the filter and explore its controls and layout, the more productive you will become when building icons.

IconBuilder Tip - If you are unfamiliar with the Windows 16 color palette, have no fear. We've provided it for you with IconBuilder XP. Just look for the 16colors.act in the IconBuilder download.

One thing to remember when building icons for the Windows platform with IconBuilder is that there are multiple sizes and depths that need to be added into the .ico file prior to saving. IconBuilder does a good job of translating an icon designed in millions of colors to the lower 4-bit (Win 16 color) depth, but if you are looking for the best results at this bit-depth, we recommend touching up these resources by hand in Photoshop. Coloring pixels by hand will always ensure the best control of how the final resource will look. Many Windows users will see these lower bit-depth icons, so its always a good idea to optimize them the best you can. As a bonus, we've included the Windows 16 color table for you to use as needed. You can find it in the IconBuilder Tutorial folder.

Continue to the next section to learn how to create a similar icon for the Windows XP operating system that makes use of transparent masks.
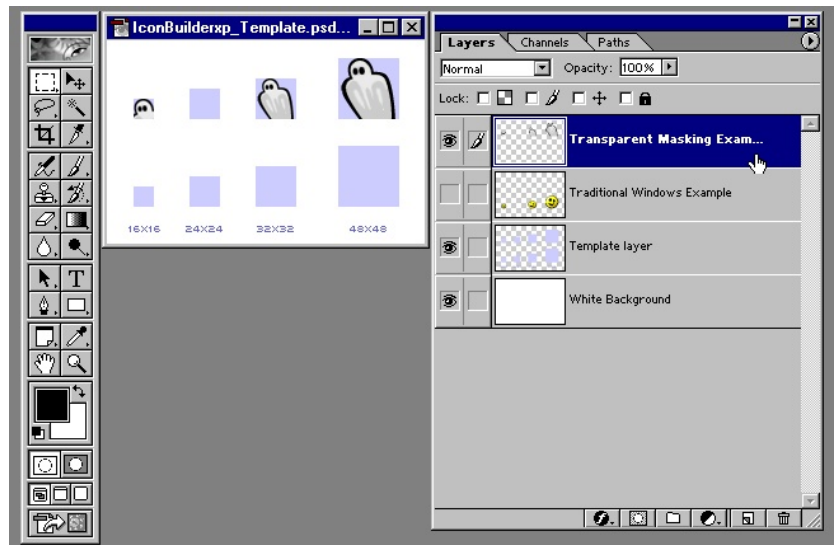
1-a) Open the IconBuilderxp_Template.psd file from the tutorial folder to begin. This time turn OFF the Traditional Windows Example layer and turn ON the Transparent Masking Example layer in the Layers dialog box. Again, no 24x24 resources are used here, so that portion of the template is empty.
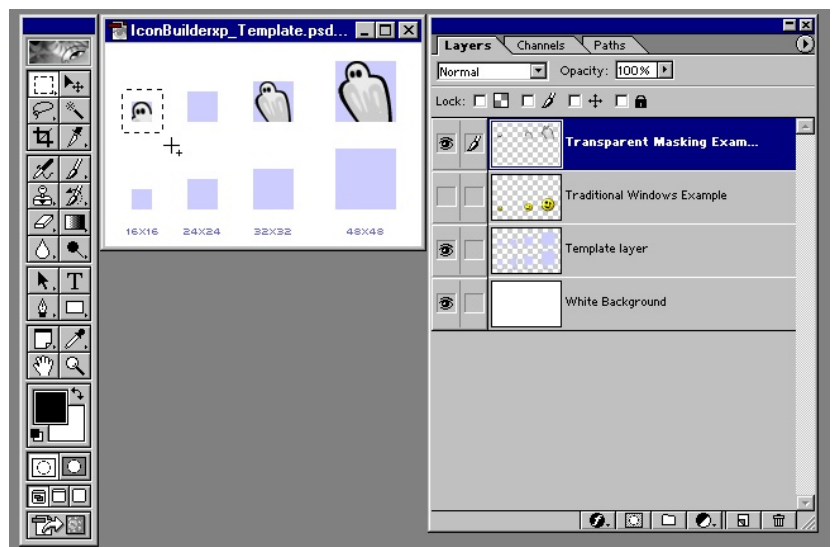
IconBuilder Tip - Since we won't be adding any special masking to the 16x16 version of the icon, we're going to build this size resource into the file first. By making a small selection around the 16x16 version, you'll find it easier to locate and center the ghost's head in the resource grid once inside the filter. By doing this, you're telling IconBuilder not to consider the entire layer for icon construction, only the selected area. This saves time and effort.

1-b) Ensure that the Marquee Tool (square selection tool) is selected in the Tools Palette by clicking on it. Drag a small selection around the 16x16 version of the ghost's head.

2) Select Filter > Iconfactory > IconBuilder XP to launch the filter.

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IconBuilder Tip - You can get greater contol over the placement of the Photoshop Layer by pressing the Num Lock key. Once this is pressed, you can then use the arrows on the numeric keybad to nudge the layer in any direction.
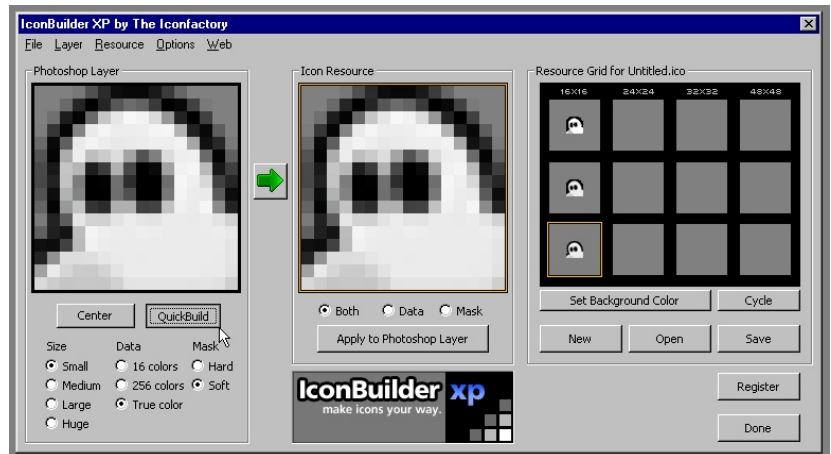
**3)** Click the 16x16, 32-bit cell in the center resource grid to select it. Click and drag the cursor in the Photoshop Layer window until the 16x16 version of the ghost's head is visible and centered. Hold the Shift key down and click QuickBuild.
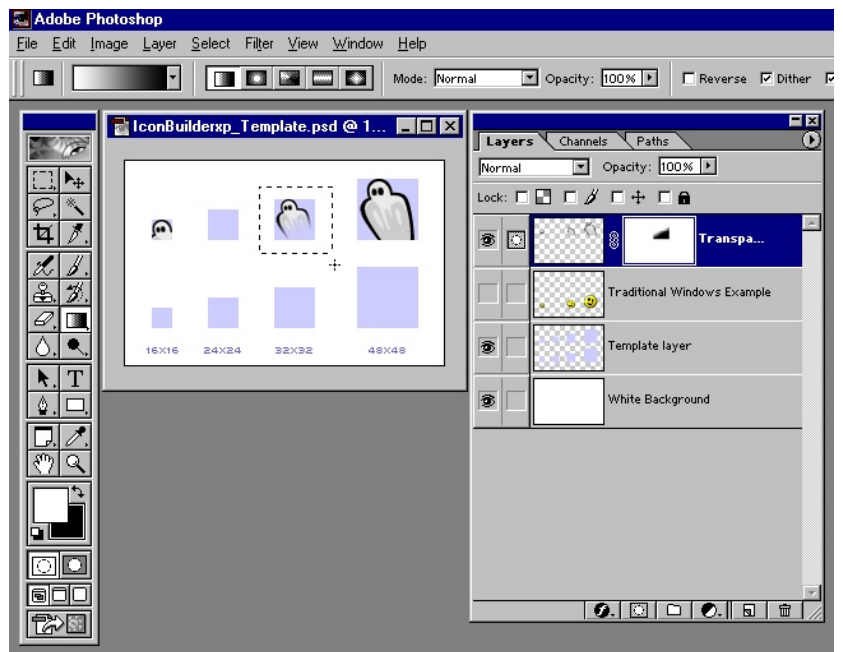
Creating Transparency
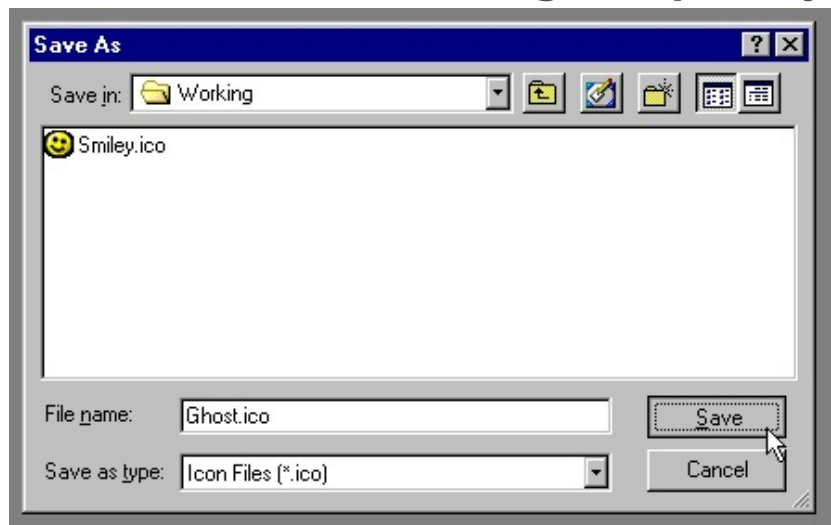
4-a) Click the Save button to bring up the Save dialog box. Select the "Untitled" portion of the file name (leave the .ico extension) and rename this "Ghost." Click the Save button and save the icon file to your hard drive. Click the Done button to exit IconBuilder and return to Photoshop.
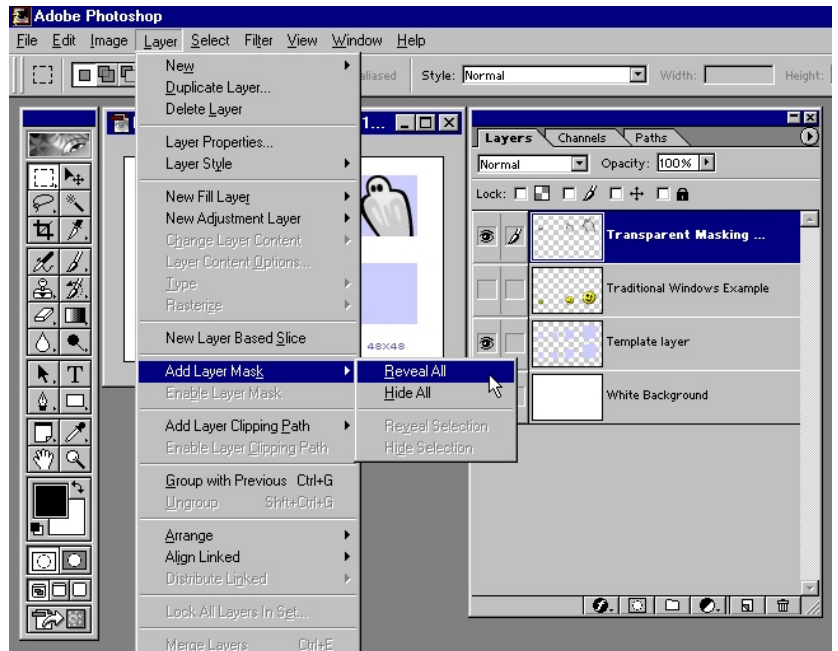
**4-b)** Using the Rectangle Marquee tool, drag a square selection around the 32x32 version of the ghost on the Transparent Masking Layer. Select Layer > Add Layer Mask > Reveal All.

IconBuilder Tip - Simply adjusting the opacity settings of a given layer, (or creating a layer mask as we are doing here) won't translate to the icon resource until the layer is duplicated. This sets the transparent levels in the image data and allows them to be read by IconBuilder. Remember to turn off any background layers prior to duplicating.

4-c) Make sure black is the foreground color and white is the background color. Use the Gradient Fill tool to drag a selection from the bottom right of the ghost's body to the upper left of his head. This will cause the ghost to "fade" out near the bottom. Next, repeat steps **4-b** & **4-c**, but apply them to the 48x48 version of the ghost.

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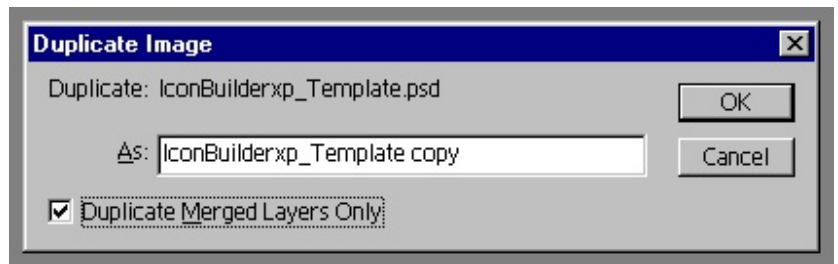
5-a) Turn off both the White Background and Template Layer in the Layers window. Make sure that the Transparent Masking Layer is still highlighted and selected by clicking on the layer's name. Select Image > Duplicate. Select the Duplicate Merged Layers Only checkbox and click OK.

5-b) Select Filter > Iconfactory > IconBuilder to launch the filter. Make sure the 32x32, 32-bit cell in the resource grid is selected. Click and drag the cursor in the Photoshop Layer window until the 32x32 transparent version of the ghost is centered. Hold the Shift key down and click QuickBuild.

Next, select the 32-bit 48x48 grid cell. Click and drag the cursor to the left in the Photoshop Layer window until the 48x48 transparent version of the ghost is centered. Hold the Shift key down and click QuickBuild.
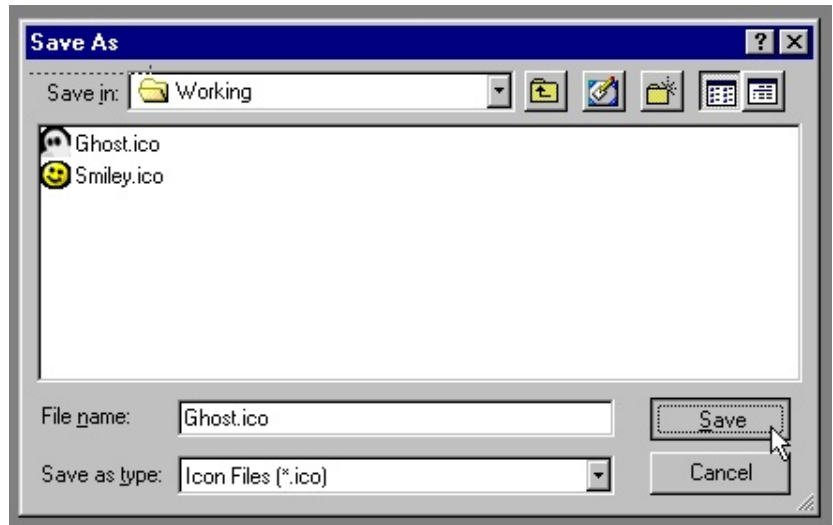
5-c) Click the Save button to bring up the Save dialog box. The file name should already be filled in, so simply click Save again to replace the previously saved .ico file. Be sure to leave the .ico file extension in the file name. Click the Done button to exit IconBuilder and return to Photoshop. If the Save dialog box does not appear when you click the save button, select Save As... from the File Menu to execute these steps.

Congratulations!

You've constructed your first modern Windows icon with IconBuilder!

If you are creating icons for a Windows based software application, be sure to check them with the IconTest.exe program in the Testing folder of IconBuilder xp. Testing early will always save you potential headaches later on.

Also, keep in mind that the limited nature of the Windows 16-color palette should be taken into account when designing the icon itself. Icons for the Windows platform (even those for the advanced XP) need to contain 16-color versions to make them backward compatible. Try to design your Windows 16-color versions to be as clean and strong as possible.

Be sure to read the IconBuilder User's Guide PDF file for even more advanced tips and tricks when constructing icons for the Windows platform. You'll be glad you did!