

Deep Mask



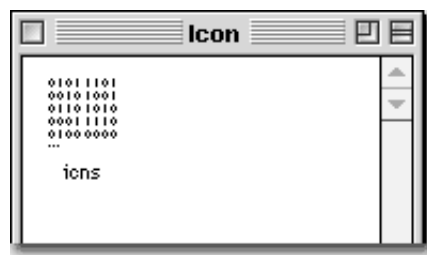
Disclaimer: All the information and methods presented here are simply based on my practical experiences, not on proper technical documents provided from Apple. So try these processes **at your own risk**. In addition, since the processes involves modifications in the hexadecimal editor, if you are not familiar with ResEdit, I do recommend that you should not try them. Again, I am NOT responsible for any damage might be caused by the processes given below.

Deep Mask

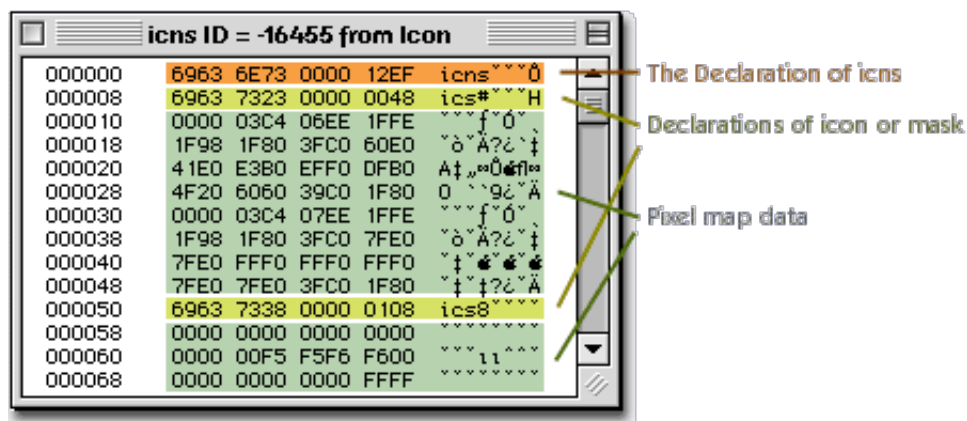
Deep mask is a mask with 8-bit depth and allows us to apply a transparent effect to an icon. This new icon feature is available under Mac OS 8.5, however, unfortunately a custom icon pasted via the information window (Command + I) don't have a deep mask but have a normal 1-bit mask only. We, therefore, have to add the resource for deep mask (18mk) to the custom icon resource to apply transparent effect.

A Structure of icsn Resource

When opening a custom icon file with ResEdit, we find only one resource called "icsn". The current ResEdit version don't have any particular editors except the hexadecimal editor to edit this resource. So we have to modify it by mainly using the Hex editor.



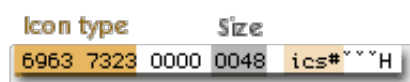
According to my observation, the icsn resource seems to have a structure given below;



- The declaration of icsn indicates the type and size of the resource itself.



- The declaration of icon or mask each indicates the type and the size of pixel map data following it



As regards type here, for example, **ic18** stands for large 8-bit icon, **ic32** for large 32-bit icon and **18mk** for large 8-bit mask.

- Each cluster of pixel map data contains an appropriate volume of hexadecimal values for icon or mask.

```

0000 03C4 06EE 1FFE
1F98 1F80 3FC0 60E0
41E0 E3B0 EFF0 DF80
4F20 6060 39C0 1F80
0000 03C4 07EE 1FFE
1F98 1F80 3FC0 7FE0
7FE0 FFF0 FFF0 FFF0
7FE0 7FE0 3FC0 1F80

```



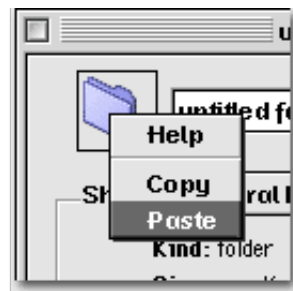
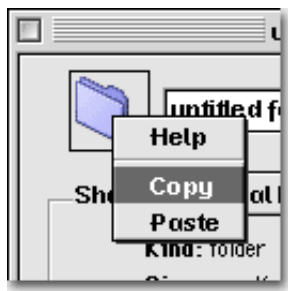
A Way to Create a Deep Mask

1. Add the Declaration of l8mk.

To create a deep mask, at first we have to add the declaration for deep mask to the target icns resource. There are a couple of ways to archive this process. Here is the most safe way.

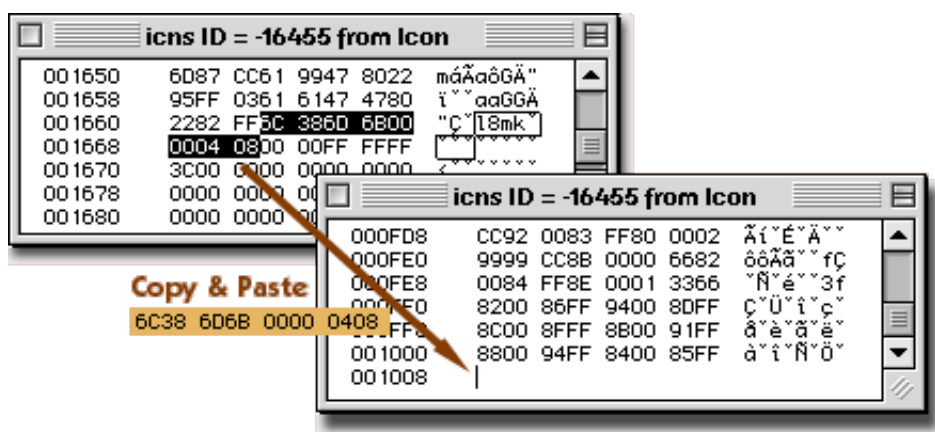
- 1) Create (A) a target custom icon pasted via the information window and open it with ResEdit.
- 2) Open (B) an icns resource that already contains a deep mask with ResEdit.

You can acquire this sort of icns easily; Create a new folder, copy its icon and paste it to itself, then Finder turns out a custom icon that contains the icns resource represents for the generic folder. The generic folder icon has transparent shadow using deep mask.



- 3) Copy the declaration part for deep mask in (B) to (A).

Find the declaration part for deep mask among the garbage codes of icns with the Find ASCII command (Command + G) by the word "l8mk". When you find the word, select the codes for 8 bytes length (16 digits in appearance) including codes for the word. Then copy and paste them to the end of (A).

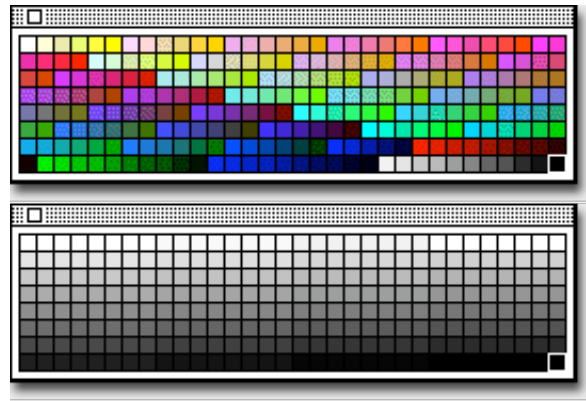


Instead of all the steps above, of course, you can directly enter the hexadecimal codes: **6C386D6B00000408** into the target, but never fail to type them.

2. Draw the Deep Mask with an icl8 Resource.

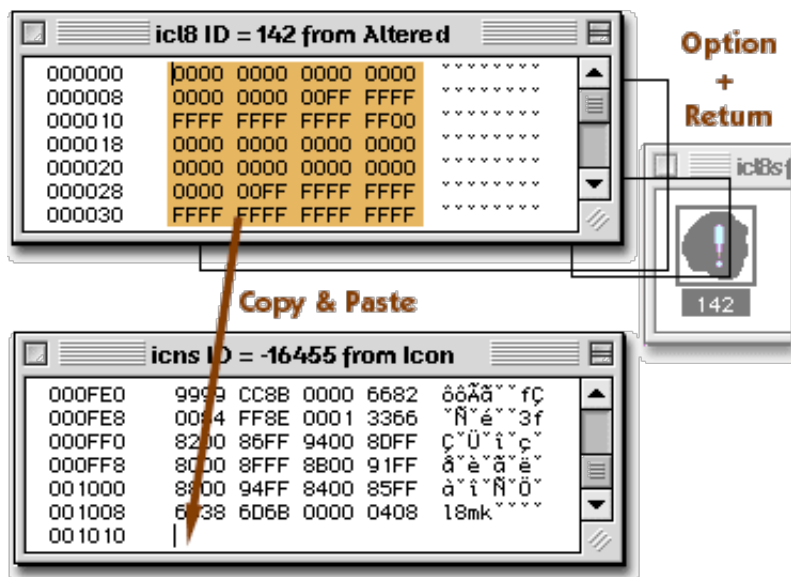
The deep mask has 256 different levels of transparency. These levels can be alternatively represented by standard 256 colors in a large 8-bit icon resources (icl8), where white on the top left corresponds to the complete transparency and black on the bottom right; the opaqueness. In other words you can think of the standard 256 colors as a gray scale of 256 levels regardless of their hue, saturation and lightness.

Create an icl8 resource in a separate resource file from the target, and draw the mask with the standard 256 colors.



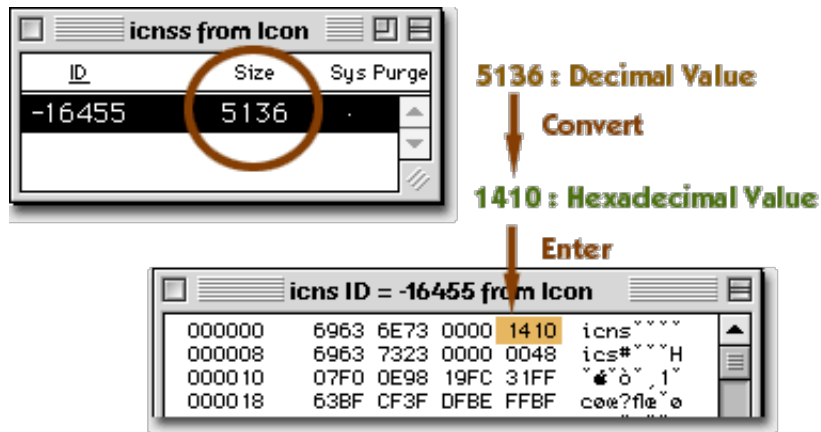
3. Paste the Hex Codes of the Pixel Map.

When you finish drawing the deep mask, once close the icl8 resource and open it holding down Option key. Then the resource is opened with the hexadecimal editor. Select all the hexadecimal codes and copy and paste them into the end of the target icns.



4. Fix the Size of the icns Resource.

After pasting the codes of pixel map data, once close the resource and check its size. Then convert the decimal value into the hexadecimal value. If you have a calculator that can deals with hexadecimal system, do use it. Replace the last 2 bytes of the first row in the target icns with the value that you converted.



5. Make Sure the Target Has the Deep Mask Properly.

Save and close the target resource. Going back to Finder, make sure that the target custom icon has the deep mask properly. If it seems to have any changes or effects, try either of the following actions to let Finder know that now it has the deep mask.

Alternative actions to ensure the effect of the deep mask

1. Change the name of the target folder.
2. Duplicate the target folder.
3. Once close the window includes the target folder and open it again.

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