


About Creating Finder Bundles

The Finder employs a scheme of interrelated resources to maintain information on your application and any documents it creates or uses. After creating an application, you will want to set up its resources so that the Finder will display a snappy icon for it and so that users can click-start it by double-clicking its documents.

Note: ResEdit 2.1 (the latest as of press time), Resorcerer, and other resource editors now have simplified the icon/bundle creation process. Check your resource editor manual for details. The following discussion is still correct, but making icons is no longer the arduous task it once was. If you don't have ResEdit 2.1 (or later) or Resorcerer 1.0.1 (or later), you probably have to add icon resources longhand. If so, read on...


In this summary, we will assume you have and are familiar with ResEdit. We'll also assume that you want two types of icon - one for your application and one for its documents.



Note: The easiest way to give your application icons is: create a resource with a type that matches your creator ID; copy the 'BNDL', 'ICN#' and 'FREF' resources from an existing application, then go through and modify them wherever it looks like you should.




1. When you build your application, give it a creator ID. For instance, we'll use 'MyAp'. The creator ID must be unique to your system. (Note: you're supposed to register creator IDs with Apple).
2. Pick a file type for your documents. We'll use 'MyDx'.
3. Add a "creator resource" to your application. Its type is the same as your creator ID ('MyAp') and its ID is 0. It contains a pString that can contain version information, author credits, and so forth. This text will be displayed in the  Finder window (unless you create a 'vers' resource, [see below]).

Note: Apple reserves for its own use all creator IDs, file types and resource types consisting of four lower-case characters. You can give your applications any other combinations that aren't already taken.


4. Add two 'ICN#' resources to your application.
 Use 'ICN#' 1000 for your application.
 Use 'ICN#' 1001 for its documents.
5. Add two 'FREF' resources to your application, giving them the same IDs you used in the 'ICN#' resources.
 'FREF' ID 1000 contains file type = 'APPL' and local ID=0.
 'FREF' ID 1001 contains file type = 'MyDx' and local ID=1.
6. Add a 'BNDL' resource to your application. Let its ID be 128. This ties everything together.

Set Owner Name to 'MyAp'
 Set Owner ID to 0
 Click the "*****" and press 
 Set Type to 'ICN#'

Click the "-----" and press 
Set LocalID to 0
Set RsrcID to 1000
Click the "-----" and press 
Set LocalID to 1
Set RsrcID to 1001

Click the "*****" and press 
Set Type to 'FREF'
Click the "-----" and press 
Set LocalID to 0
Set RsrcID to 1000
Click the "-----" and press 
Set LocalID to 1
Set RsrcID to 1001

Note that if your application creates several types of document, you would add more 'FREF' and 'ICN#' resources and additional items under the 'FREF' and 'ICN#' sections of the 'BNDL'.

7. If you want, you can create a couple of 'vers' resources (IDs 1 and 2). The pString text in 'vers' 1 is displayed on the version line of the Finder's  window and the text in 'vers' 2 is displayed beneath the filename in that window. See TechNote 189.
8. Use a file utility to make sure that your applications Finder attributes show a file type of 'Appl' and a creator ID of 'MyAp'. The "bundle bit" (bit 13) must be set and the "inited bit" (bit 8) should be clear. See the FInfo structure and **SetFInfo** for related information.

The next time that the Finder encounters your application, it will copy your 'ICN#' and 'FREF' resources into the Desktop file for the parent volume and thereafter, your application and its documents will be displayed with your icons.

Note: If you change one or more of your icons (or other bundle information), the Finder won't know about the change, since it will be working with its own copy in the Desktop file. To make the Finder aware of the changes, you can force a rebuild of the Desktop by pressing Cmd-Option while booting the system (or while inserting a diskette).

Thereafter, a double-click on your document files (which have a creator ID of 'MyAp' and a file type of 'MyDx') will start your application. If your application is already open under MultiFinder, a double-click will open the document. See **GetAppFiles** (and its neighbors) in the **Segment Loader** for a discussion of click-starting documents.

Whenever you create a new document file (see **Create** or **PBCreate**), specify *creatorID* = 'MyAp' and *fileType* = 'MyDx'. You can force a document to take on a new icon by using **SetFInfo** or **PBSetFInfo**. Because of the Finder's internal caching, the changes may not be noticed for a while.

Note: You should register your creator signatures with MacDTS (Macintosh Developer Technical Support) to avoid any conflicts with other applications that have the same creator type.