New Technical Notes

Macintosh

Developer Support

Finders and Foreign Drives

Toolbox

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This technical note describes the differences in the way the 1.1g, 4.1, 5.0 and newer Finders communicate with foreign (non-Sony) disk drives.

Identifying Foreign Drives

Non-Sony disk drives can send an icon and a descriptive string to the Finder; this icon is used on the desktop to represent the drive. The string is displayed in the “Get Info” box for any object belonging to that disk. When the Finder notices a non-Sony drive in the VCB queue, it will issue 1 or 2 control calls to the disk driver to get the icon and string.

Finder 1.1g issues one control call to the driver with `csCode` = 20 and the driver returns the icon ID in `csParam`. This method has problems because the icon ID is tied to a particular system file. So, if the Finder switch-launches to a different floppy, the foreign disk’s icon reverts to the Sony’s.

Finders 4.1 and newer issue a newer control call and, if that fails, they issue the old Control call. The new call has `csCode` = 21, and the driver should return a pointer in `csParam`. The pointer points to an 'ICN#' followed by a 1 to 31 byte Pascal string containing the descriptor. This implies that the icon and the string must be part of the disk driver’s code because only the existence of the driver indicates that the disk is attached.

This has implications about the translation of the driver for overseas markets, but the descriptor will usually be a trademarked name which isn’t translated. However, the driver install program could be made responsible for inserting the translated name into the driver.

Drivers should respond to both control calls if compatibility with both Finders is desired.

Formatting Foreign Drives

When the user chooses the Erase Disk option in the Finder, a non-Sony driver needs to know that this has happened so it can format the disk. Finder 4.1 and newer notify the driver that

the drive needs to be formatted and verified. They first issue a `Control` call to the driver with the `csCode` = 6 to tell the disk driver to format the drive. Then they issue a `Control` call with a `csCode` = 5 to tell the driver to verify the drive.

Other Nifty Things to Know About

Finders 4.1 and newer also permit the user to drag any online disk to the trash can. The Finder will clean up the disk state, issue an `Eject` call followed by an `Unmount` call to the disk and then, an event loop later, reclaim all the memory. This means any program/accessory used to mount volumes should reconcile its private data, menus, etc. to the current state of the VCB queue. These Finders also notice if a volume disappears and will clean up safely. But, because of a quirk in timing, a mount manager cannot unmount one volume then mount another immediately; it must wait for the Finder to loop around and clean up the first disk before it notices the second. (It should have cleaned up old ones before it notices new ones, but it doesn't.)

Finders 5.0 and newer allow you to drag the startup disk to the trash; Finder 4.1 just ignored you. Finders 5.0 and newer take the volume offline as if you had chosen Eject.