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AppleCD SC: High Sierra CDs Are Accessed like any other Volume

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Accessing the information on a CD-ROM volume isn't much different than accessing the information on most magnetic disks, whether the CD-ROM discs use HFS (Hierarchical File System) for Macintosh files, ProDOS (Professional Disk Operating System) for Apple II files, or the High Sierra format for either system. Generally, if you know how to work with files and folders (subdirectories) on a hard disk, 3.5-inch disk, or 5.25-inch disk, you know how to work with the files on a CD-ROM under these formats.

High Sierra is a standard way of organizing the information on a CD-ROM. CD-ROM discs that conform to the High Sierra standard can be accessed from a variety of computers. The discs need not be customized for each different computer's operating system. You don't need to know anything about the High Sierra format to use High Sierra CD-ROM discs. You communicate with application programs as you always have.

Likewise, your application sees the CD-ROM disc as any other disk connected to the system. All file I/O calls are standard Macintosh calls. Nothing special needs to be done. For example, if, in your program, you want to read a file from a High Sierra, issue a Read command.

Nevertheless, a custom search engine may be required if the file format is unique and cannot be accessed via another application (like Microsoft Word opening a MacWrite file). If a custom, search engine must be written, using HyperCard might be the most elegant and expedient tool.

Note that there are two specifications of the High Sierra format, High Sierra and ISO 9660. Both are standards that specify a hierarchical volume and file structure for CD-ROM discs.

The High Sierra standard came about when a group of industry representatives met at Del Webb's High Sierra Hotel and Casino in Stateline, Nevada, in late 1985 to cooperatively develop a common logical

format for CD-ROM discs. The result of this series of meetings was a standard known as the "High Sierra" standard. This standard is fully specified in the May 28, 1986, "Working Paper for Information Processing-- Volume File Structure of Compact Read Only Optical Discs for Information Interchange." For obvious reasons, this is known as the "High Sierra paper."

As is the case with all good standards, the world at large wanted to adopt an equivalent standard. The International Standards Organization (ISO) has modified the High Sierra standard by running it through the ISO standardization process. The result is a new international standard, "ISO 9660-- Volume and File Structure of CD-ROM for Information Interchange." This is known as the "ISO 9660 Standard."

Although most existing CD-ROM discs are High Sierra, ISO is the wave of the future, and most future discs will be ISO. Regardless, Apple's driver will enable you to read CD-ROM discs pressed in either format, and wherever we use the term High Sierra in this article, we're referring to both the ISO 9660 and High Sierra, except where explicitly stated differently.

Finally, and as with installing the System software, ALWAYS use the Installer to install the CD-ROM driver. Using the Installer on a Macintosh installs five drivers, including the Apple CD-ROM, ISO 9660, and High Sierra drivers. Copying the Apple CD-ROM icon installs only that file. If you did a "proper" install and cannot access a "High Sierra" disc, that disk might have been created early in the development of optical storage CD-ROM technology and probably didn't follow the standards as they now read.

References:

- Tech Note #209
- AppleCD SC Developer's Guide, both available from APDA.

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