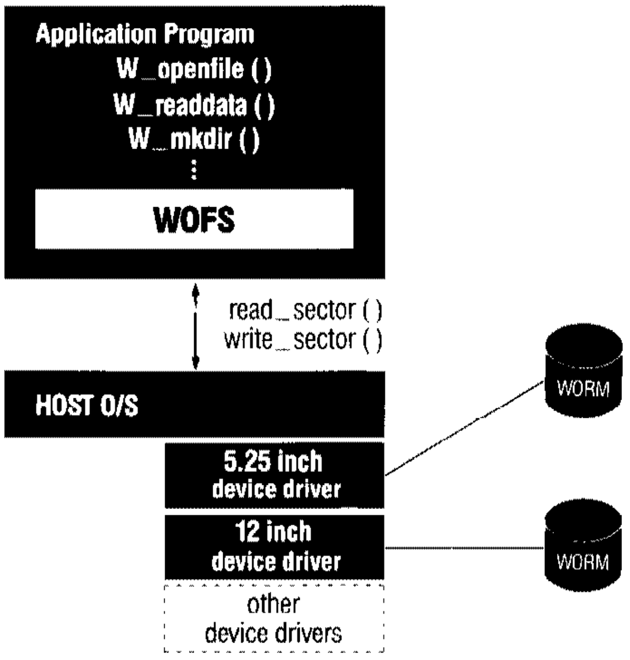
WOFS Interfaces: Embedded and Transparent Modes

Figure 1 — Embedded WOFS



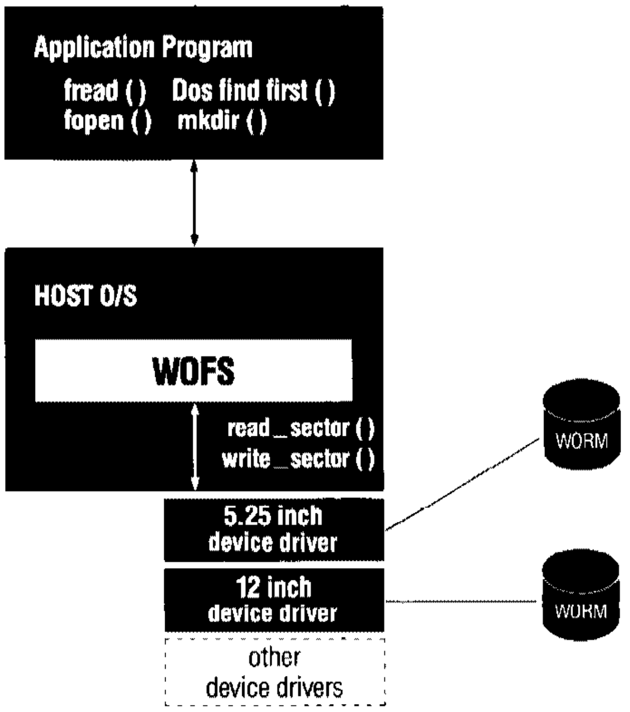
Using the embedded WOFS interface, a programmer can link a WOFS library the same way as any other callable function library.

The WOFS function library interfaces the application to the WOFS device driver and also allows a high level interface to the file system.

The illustration represents the flow of control when an application makes a WOFS system call.

In the embedded interface, all of the file system logic is contained within the application program. The operating system, therefore, is used only as a means to send read sector/write sector instructions to a device driver configured to the WORM drive in use.

Figure 2 —Transparent WOFS



The transparent WOFS interface functions at a higher level than the embedded mode. It accesses the write-file system via the native OS thereby making it "transparent," indistinguishable from other media available on the system.

The illustration shows WOFS contained within the operating system, making read/write requests directly to the drive-specific device driver.

The application program issues the file-system function calls in the form appropriate for the operating system language in use. For example, a C programmer developing an application under Xenix would use fopen ( ) and fread ( ). A programmer working in MASM under MS-DOS would issue an INT 21h request after setting up the CPU registers for "Find First" or "Create Subdirectory."

In addition to the standard OS file system interface, IOCTL calls may be used to directly access WOFS via its native interface.

Disk volumes created by embedded WOFS can be used with transparent WOFS and vice versa.

NHance®

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WOFS

(Write-Once File System)... your universal file structure for data stored on WORM (Write-Once-Read Many) optical disk subsystems.

WOFS is a high performance file system tailored for write-once media, designed to function independently of your host operating system or CPU platform.

WOFS supports all optical drives, and jukeboxes; and allows interchangeability of files between virtually *any* operating system using removable optical media. It works equally well under XENIX, UNIX, OS/2, MS-DOS, and other operating systems; providing file portability between systems.

The WOFS Advantage

- Enhances WORM capabilities: Data permanence, audit trails, very large file management, and enormous data storage capacity on removable media.
- Sets a standard for moving data across multi-vendor and multi-operating system platforms.
- Create custom WORM drivers easily for proprietary systems.
- Manipulate large date files up to 4 gigabytes with powerful UNIX-like file handling features. The number of files is limited only by your media size.
- The WOFS-Curator Utility enables users to search and access previous versions of files and directories in a volume.

WOFS Application Programmer's Interface

The WOFS C language programming interface is modeled after the powerful, easy-to-use UNIX file system calls. For example:

wofs_mnt ( ) —	mount a write-once file system
wofs_dis ( ) —	dismount a write-once file system
W_dirname ( ) —	translate a directory number to its ASCII name
W_finfo ( ) —	similar to the UNIX stat (2) function
W_lookup ( ) —	convert a part string to directory number, file number, and file name string
W_mkdir ( ) —	create a subdirectory
W_putfile ( ) —	copy a file from native file system to WOFS volume
W_openfile ( ) —	open a file, similar to UNIX fopen ( )
W_closefile ( ) —	close a file opened by W_openfile ( )
W_readdata ( ) —	read data from a file, a combination of Unix's fseek ( ) and fread ( )
W_remove ( ) —	deletes a file
W_rename ( ) —	rename a file, possibly moving it to a new subdirectory
W_unrm ( ) —	undelete a file deleted by W_remove ( )
W_read ( ) —	read data from file
W_write ( ) —	write data to file
W_lseek ( ) —	position read/write pointer within file
W_rewind ( ) —	reset read/write pointer to beginning of file

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