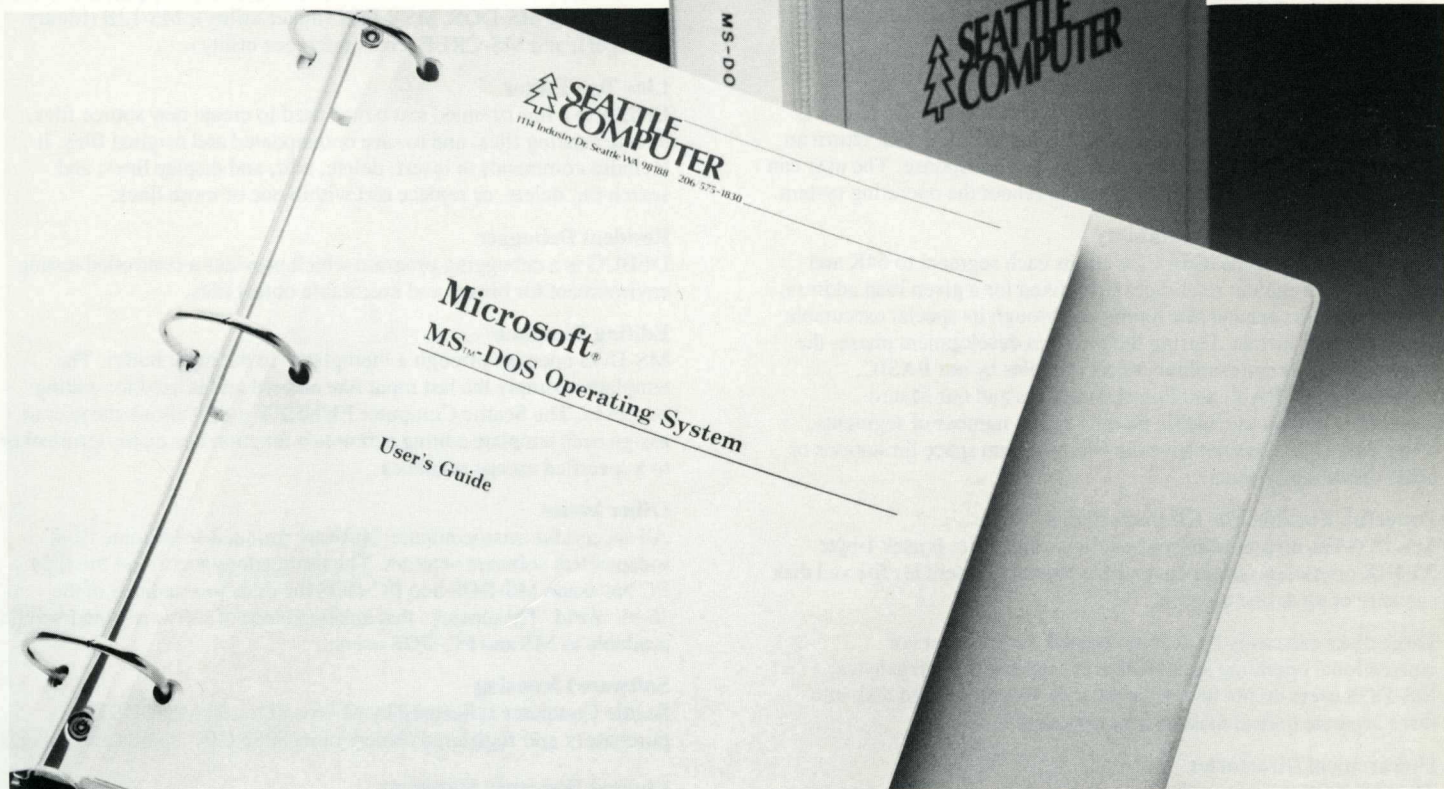


MS-DOS OPERATING SYSTEM



The heart of a computer system is a supervisory program that manages the system resources such as memory, disk and device I/O. This program is commonly called an operating system.

Microsoft's MS-DOS is an operating system for 8086/8088 based microcomputers.

Seattle Computer originally authored this operating system which was previously known as 86-DOS. Microsoft is now the owner, and through their marketing efforts, have made MS-DOS and it's superset, PC-DOS, the most popular operating systems for 16-bit microcomputers in the world.

The MS-DOS operating system from Seattle Computer requires an 8086 based microcomputer system. The operating system itself runs in and requires 64K bytes of memory.

Seattle Computer has enhanced Microsoft's MS-DOS for easy customization to various hardware configurations.

All Microsoft languages (Interpreted BASIC, Compiled BASIC, FORTRAN, COBOL, Pascal) are available from Seattle computer under MS-DOS.



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MAJOR MS-DOS FEATURES

Easy conversion from 8-bit to 16-bit

MS-DOS allows easy transportability of 8-bit machine language software to operate on 16-bit machines, MS-DOS emulates CP/M-80 system calls. By simply running 8080 assembly language source code through the TRANS translation utility, almost all 8080 programs will work without modification.

Written Entirely in 8086 Assembly Language

This provides significant speed improvements over operating systems that are largely translated from their 8-bit counterparts or operating systems written in a high-level language.

Device Independent I/O

MS-DOS simplifies I/O to different devices by assigning a reserved file name to each device. These names are built into and detected by the MS-DOS file system. Thus, even programs designed only for disk I/O can, for example, have their input come from the console or their output sent to the printer.

Redirection of Input and Output

Redirection of output allows the output of a command to go to a file other than the standard output. Likewise, the redirection of input allows input to a command to come from a file other than the standard input.

Command Filters and Pipes

A filter is a command that reads its standard input, transforms it in some way, and then outputs it. In this way, the data is said to have been "filtered" by the program. An example of this is a sorted directory listing produced by passing a standard directory listing through the "sort" filter.

If the users want to give more than one command to the system at a time, they can "pipe" a sequence of commands to MS-DOS. The standard output of any command may be connected to the standard input of any other by using the pipe operation.

Advanced Error Recovery Procedures

MS-DOS doesn't simply fade away when errors occur. If a disk I/O operation cannot be completed successfully, MS-DOS will return an error message, then wait for the user to enter a response. The user can attempt recovery rather than be forced to reboot the operating system.

Complete Program Relocatability

The architecture of the 8086 CPU limits each segment to 64K and requires intersegment references to be fixed for a given load address. MS-DOS works around this limitation through its special executable object module format. During the program development phase, the Microsoft linker can combine object modules by our BASIC, COBOL, FORTRAN, and Pascal compilers and our Macro Assembler into an executable module of any number of segments. Thus, MS-DOS does not have the 64K program space limitations of other operating systems.

Powerful, Flexible File Characteristics

MS-DOS has no practical limit on file or disk size. It uses 4-byte XENIX operating system compatible logical pointers for file and disk capacity of up to one gigabyte.

Large disks can easily be accommodated. Unlike users of conventional operating systems that are limited to 8 Megabytes, MS-DOS users do not have to break a 24 Megabyte hard disk into three separate logical disks to accommodate it.

Hierarchical Directories

The MS-DOS organizes files on a disk in directories. The directory contains information on the size of the files, their locations on the disk, and the dates that they were created.

Any one directory can also contain other directories (referred to as subdirectories). Subdirectories are a way of dividing files into convenient groups. For example, the user may want all accounting programs in one directory and text files in another. This method of organizing files is called a hierarchical directory structure.

Fast, Efficient File Structure

The MS-DOS file structure eliminates the need for "extents," minimizes the number of accesses to the directory track, provides for duplicate directory information and verify after write.

Batch Processing

Often it is necessary to type the same sequence of commands over and over to perform some commonly used task. With MS-DOS the command sequence may be put into a special file called a batch file. The entire sequence can be executed by typing the name of the batch file. "Batches" of commands in such files are processed as if they were typed at a terminal.

No Need to Log in Diskettes

Unlike CP/M there is no need to log in a new diskette by typing Control-C.

Relocatable Macro Assembler

MACRO-86, provided as part of the Seattle Computer MS-DOS package, is patterned after the Intel 8086 assembler. MACRO-86 features include structures, records, 8087 support and MACRO-80 compatible macros. MACRO-86 produces relocatable code in the Intel relocatable format for use by the linker.

Software Development Utilities

In addition to the Macro Assembler, Seattle Computer provides with its version of MS-DOS: MS-LINK (linker utility), MS-LIB (library manager), and MS-CREF (cross reference utility).

Line Text Editor

EDLIN is a line oriented text editor used to create new source files, update existing files, and to save both updated and original files. It includes commands to insert, delete, edit, and display lines; and search for, delete, or replace text within one or more lines.

Resident Debugger

DEBUG is a debugging program which provides a controlled testing environment for binary and executable object files.

Editing Template

MS-DOS operates through a "template" in the input buffer. The template is simply the last input line entered and is used for editing purposes. The Seattle Computer FUNKEY utility allows the user to assign each template editing action to a function key on his terminal or to a specified escape sequence.

Other Issues

All successful microcomputer software products have come from independent software vendors. The tremendous success of the IBM PC has made MS-DOS and PC-DOS the defacto standards of the 16-bit world. This ensures that an abundance of software is and will be available to MS and PC-DOS users.

Software Licensing

Seattle Computer is licensed by Microsoft to sell MS-DOS to purchasers and registered owners of its 8086 CPU boards and systems.

Limited Warranty Summary

Seattle Computer provides a limited warranty for the media only for this product. In the event the media is defective, Seattle Computer will replace or repair the media for a period of 30 days from date of purchase by the original end-user. A complete warranty statement is printed in the product manual and is also available from Seattle Computer upon request.



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