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EXDOS/IS-DOS is a relatively complicated system and so it is the intention of this document to give a very brief overview of how the various parts of the system relate to each other, in order to help in understanding the rest of the documentation. More details of the various parts of the system can be found in the following documents:

PER-2	EXDOS - DISKIO Specification
PER-3	EXDOS - Unit Handler Specification
PER-4	DISKIO and UNITH Implementation Notes
PER-5	EXDOS - System Specification
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## 1. INTRODUCTION - EXDOS and IS-DOS

It is important in understanding the system, to distinguish between EXDOS and IS-DOS.

EXDOS is a disk extension to the EXOS operating system, contained in ROM on the disk controller card, which is automatically linked in when the Enterprise is switched on. It provides an EXOS disk device and also various extension commands which are available to all applications programs through the normal "scan system extensions" EXOS call (for example "colon" commands from IS-BASIC).

IS-DOS is an EXOS applications program which can be loaded from disk either automatically when EXDOS starts up, or afterwards by an explicit command from the user. Once it is loaded, IS-DOS controls the machine in the much the same way that IS-BASIC normally does. It provides a command line environment similar to MS-DOS in which the user can type commands to IS-DOS or load transient programs which run and then return to IS-DOS.

## 2. EXDOS Organisation

The central part of EXDOS is the FILING SYSTEM HANDLER. This provides all the facilities necessary to access and manipulate files on disks. The user's applications program does not normally talk to the filing system handler directly but rather goes through two possible routes, the DISK DEVICE or the EXDOS CLI.

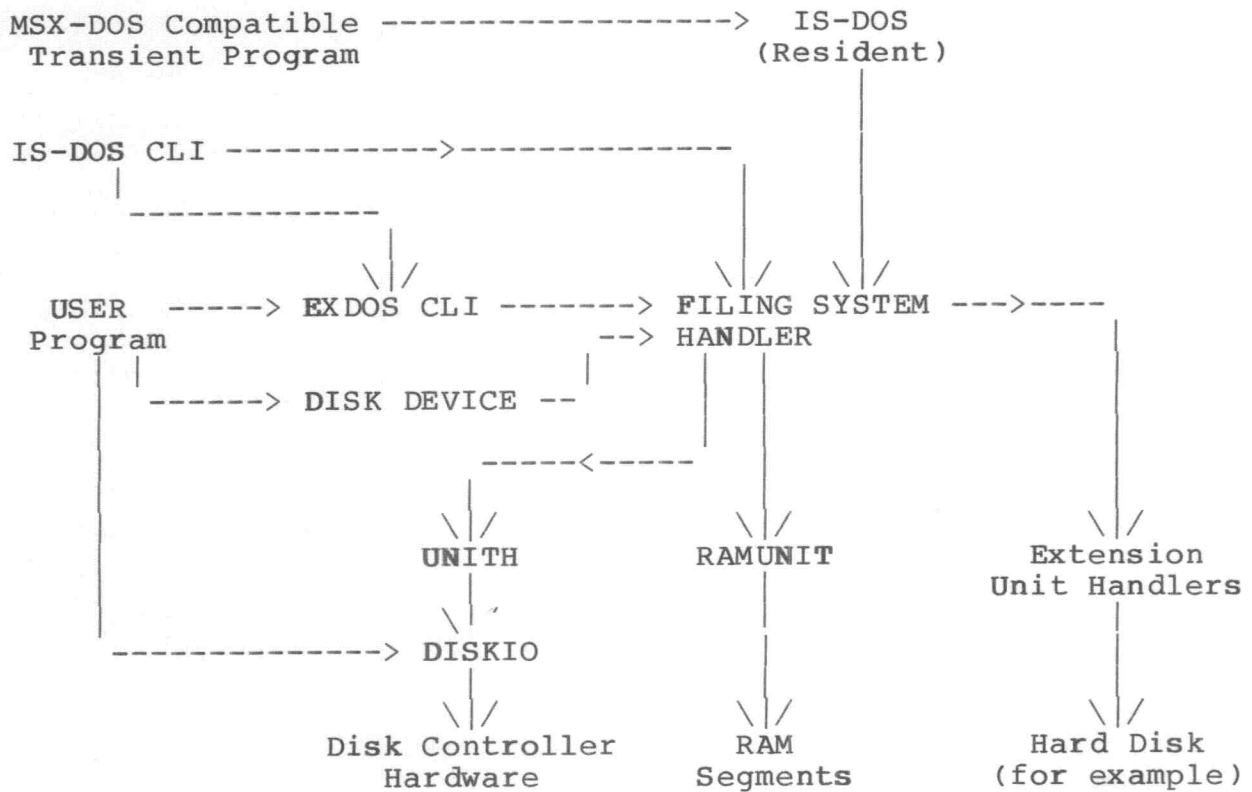
The DISK DEVICE is an EXOS device driver which EXDOS automatically links in when it starts up. This can be used like any other EXOS device, allowing the user to open and close channels to disk files, and read or write data to them.

The EXDOS CLI is an EXOS system extension which interprets certain command strings ("colon" commands from IS-BASIC) to provide functions such as renaming and deleting files and giving directory listings.

When EXDOS needs to access a disk, it always does so through a UNIT HANDLER. There is a built in unit handler (called UNITH) contained in the EXDOS ROM which provides an interface to up to four disk drives connected to the disk controller card. Additional unit handlers can be linked in to allow EXDOS to access any other disk hardware which may be created. In addition to UNITH, the EXDOS ROM also contains another unit handler (called RAMUNIT) which can be linked in by an EXDOS CLI command to provide a RAM-disk facility.

UNITH does not access the disk controller hardware directly. Instead, it always goes through DISKIO which provides a very low level interface to the disk controller. This low level interface is also available directly to the user for accessing non-standard disks, and also for functions like disk formatting.

The inter-relation of all these various sections of code is shown in the diagram below. IS-DOS is included in this diagram to show how it fits in, although it is not contained in the EXDOS ROM (see the next section). The USER in this diagram refers to EXOS applications programs such as IS-BASIC, and also to the person using these programs.



EXDOS System Organisation

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### 3. IS-DOS Organisation

The code of IS-DOS is on disk rather than being in ROM and will be loaded automatically at power on, or by an explicit EXDOS CLI command. When loaded it sets up a standard EXOS environment with certain defined channels open (for example video, keyboard and editor), and interprets commands typed by the user.

The way in which IS-DOS fits in with EXDOS is shown in the diagram above, although only the most important connections are shown. The user's commands are interpreted by a section of IS-DOS called the IS-DOS CLI. This handles commands in various different ways, the important ones of which are:

1. Passing them to the EXDOS CLI for interpretation.
2. Interpreting them internally, using the FILING SYSTEM HANDLER to carry out disk operations (and maybe using EXOS as well).
3. Passing them to the EXOS "scan system extensions" function call for interpretation by other ROMs.
4. Loading the ".COM" file from disk and executing it as a transient program.
5. Reading subsequent commands from the ".BAT" file

When IS-DOS loads a transient program, it provides it with a CP/M and MSX-DOS compatible environment in which to run. This is done by the resident portion of IS-DOS which remains in memory while the transient program is running (the IS-DOS CLI can be overwritten by the transient program). This resident portion translates CP/M function calls into calls to the FILING SYSTEM HANDLER, and also handles the re-starting (and possibly re-loading) of the IS-DOS CLI when the transient program finishes. This latter function includes controlling batch file processing.

Transient programs loaded by IS-DOS can make all important CP/M and MSX-DOS calls, and some CP/M BIOS calls. This ensures that programs written for CP/M or MSX-DOS will work under IS-DOS. However IS-DOS programs can also make EXOS function calls and can thus make full use of all the Enterprise's features. These calls can be mixed together in any way.

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