

# REVIEWS

## DR DOS 6: worthy alternative to MS-DOS 5

Digital's latest adds task switcher, disk management utilities, improved Windows support.

BY BRETT GLASS CONTRIBUTING EDITOR

Featuring added speed, power, and capabilities, DR DOS 6.0 is Digital Research Inc. (DRI)'s latest salvo in the battle for the hearts and minds of DOS users. Shipped a little over a year after DR DOS 5.0 and just a few months after MS-DOS 5.0, DR DOS 6.0 raises the ante yet again with new hypertext help, disk compression, and file defragmentation utilities. To keep up with the competition, DRI has also added a new task switcher.

In addition, many of the earlier version's features have been improved. There is more application memory, better Windows compatibility, and enhanced security. A number of new DOS commands have also been added. (We reviewed DR DOS 5.0 on May 27, page 91; and MS-DOS 5.0 on July 8, page 61.)

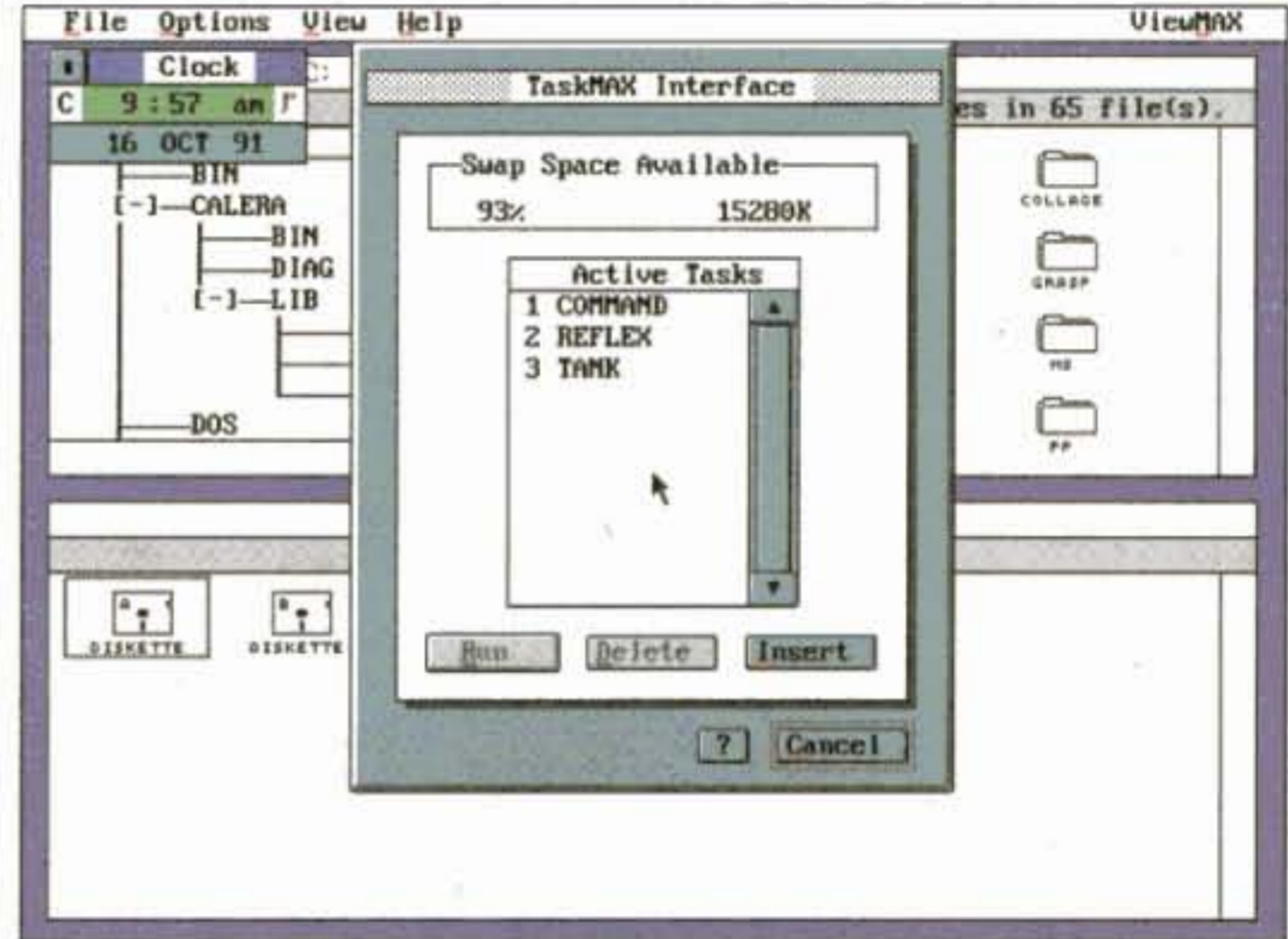
### FEATURES:

DR DOS 6.0 includes all the features of its previous incarnation and adds more. A group of new hard disk utilities — collectively called DiskMax — give you disk compression and disk caching capabilities. The disk cache application is a version of the popular Super PC-Kwik, and the disk compression utility is SuperStor from AddStor Inc. (In an informal test, SuperStor increased the capacity of the fully loaded disk on one test system by about 75 percent.) A new file defragmenter — Diskopt — is also included.

DR DOS offers two ways to help you recover deleted files. The simple method, Diskmap, takes a snapshot of your disk's File Allocation Table (FAT) and preserves the information needed to help you recover files. The sophisticated method — Delwatch — actually preserves the files you delete, changing them into "pending delete" files. Command-line options let you choose which files it saves (by file extension) and set the maximum number of saved files. You can also set a limit on the number of identical file versions that can be saved.

DR DOS also adds new file, disk, and system security features. In addition to file and directory passwords, this new version of DR DOS has power-on "user" and "supervisor" password protection (in addition to the file protection capabilities of Version 5.0). Intruders cannot get around the password prompt by booting with a floppy, because floppy-disk-based operating systems will not recognize the hard disk. (DR DOS will still prompt for the password if you boot from a properly configured Version 6.0-based floppy disk.) If you walk away from your system for a moment, you can disable the keyboard with the Lock command.

Version 6.0's new task switcher — TaskMax (not included in DR DOS 5.0) — surpasses MS-DOS 5.0's capabilities. TaskMax lets you switch between a maximum of 20 simultaneous tasks, and it can be run from either the command line or from within ViewMax, DR DOS' graphical user interface. (Microsoft's switcher



DR DOS 6.0's ViewMax has a CUA interface with icons, overlapping windows, and tree views. It supports Version 6.0's task switcher — TaskMax.

must be run from within DOS Shell, its GUI.) In addition, TaskMax will swap tasks to either extended or expanded memory.

**Command Enhancements:** The Format command now formats hard disks. Previously, hard disk formatting was hidden in the Fdisk program. There's now an FC (File Compare) command, which works the same as it does in MS-DOS.

Owners of PostScript printers will love Script, a useful utility that intercepts ASCII printer output (or accepts it from a file) and translates it into PostScript. Script also lets you select a point size and choose landscape or portrait page orientation.

There is also a character sequence you can add to your DOS prompt — \$x — that executes a program every time the prompt appears.

**New commands:** There are two new commands, Move and Rendir. The former move files between directories and the latter lets you quickly rename directories. There are also several new commands for system batch files (e.g., AUTOEXEC.BAT), among them a statement that tests for a directory's existence. Gosub and Return statements let you temporarily branch out of a batch file. The Switch statement waits for you to press a number key and uses the number to select one of a list of labels to jump to.

The list of CONFIG.SYS commands

has likewise been extended to include the Switch command, labels, Goto, Gosub, and Return. Three new commands — Cls, Cpos, and Echo — clear the screen, position the cursor, and print messages within CONFIG.SYS.

The Hibuffers and Hidos commands load DOS buffers and the DOS kernel into high memory. And the Timeout command allows the system to time out and use a default if it gets no response to a question.

### PERFORMANCE:

**Memory management:** In Version 5.0, DR DOS' MemoryMax memory management system, with its capability to load the operating system, drivers, and TSRs high, was one of the operating system's most compelling features. However, it lacked some important features, such as the capability to run Windows. Version 6.0 corrects this deficiency and also adds support for Windows' standard mode.

DR DOS is also streamlined to give DOS applications even more memory. We found 624K free on a Northgate Elegance 386 when we used DR DOS' own memory manager and 625K free when we ran DR DOS with QEMM 5.13. This puts it right up there with MS-DOS 5.0, both of which are pushing DOS to new memory limits on 386 machines.

DR DOS 6.0 is especially valuable for PC users who have not upgraded their

### REPORT CARD

### INFO WORLD

### Disk Operating Systems



	(InfoWorld weighting)	(Your weighting)	DR DOS Version 6.0	MS-DOS* Version 5.0
<b>List Price</b>			\$99	\$99
<b>Performance</b>				
Memory handling	(150)	( )	Excellent	Very Good
User interface	(75)	( )	Very Good	Very Good
Speed	(125)	( )	Good	Very Good
Compatibility	(150)	( )	Very Good	Very Good
<b>Documentation</b>	(50)	( )	Excellent	Very Good
<b>Setup</b>	(75)	( )	Good	Very Good
<b>Ease of learning</b>	(50)	( )	Very Good	Very Good
<b>Ease of use</b>	(100)	( )	Very Good	Good
<b>Error handling</b>	(25)	( )	Satisfactory	Satisfactory
<b>Support</b>				
Support policies	(50)	( )	Good	Satisfactory
Technical support	(75)	( )	Satisfactory	Satisfactory
<b>Value</b>	(75)	( )	Excellent	Excellent
<b>Final scores</b>			<b>7.6</b>	<b>7.1</b>

Use your own weightings to calculate your score

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80286 or 8088 machines. Version 6.0 can provide more than 620K of free space on a 286 machine with a NeAT, LeAP, or SCAT chip set. In addition, Version 6.0 provides more than 600K of space on an 8088 machine with a LIM 4.0 memory board.

DR DOS 6.0's improved memory handling earns an excellent score.

**User interface:** ViewMax, DR DOS 6.0's graphical shell, is almost identical to the version in DR DOS 5.0. It features more GUI elements (such as icons and overlapping windows) than does MS-

DOS 5.0's DOS Shell. ViewMax also adds the capability to control TaskMax by letting you select a running task from its menu with the mouse. DR DOS with ViewMax earns a very good score in this category.

**Speed:** DR DOS 6.0's overall speed was slightly slower than 5.0's. In our CPU-intensive tests, Version 6.0 was about 1 percent slower than DR DOS 5.0 and 3 percent slower than MS-DOS 5.0. Running our disk-intensive tests, DR DOS was 2 percent slower than the previous version and 4 percent slower

than MS-DOS 5.0.

DR DOS 6.0 had some unexpected speed results in our Windows test suite. With Windows' SmartDrive installed, DR DOS 6.0 was 9 percent slower than Version 5.0 and 12 percent slower than MS-DOS. Worse, with Super PC Kwik installed (the disk caching utility bundled with DR DOS), DRI's newest DOS was more than 24 percent slower than MS-DOS with SmartDrive. After we changed the "VirtualHDIrq" line in the Windows SYSTEM.INI file (as documented in DR DOS' manual under "Optimizing your

disk"), Windows with PC Kwik ran almost as fast as Windows with SmartDrive.

The speed of some DOS applications was greatly improved with PC Kwik. Running dBase with the disk cache reduced its disk activity by nearly half.

Because of compatibility problems with some of the common business applications in our DOS test suite and software caches, we do not score operating systems with disk caching enabled — even when caching is bundled in the package. Overall DR DOS 6.0 rates good in speed.

**Compatibility:** Unlike Microsoft, which uses a TSR (Setver) to deceive specific applications about the DOS version, DRI has programmed DR DOS to tell all applications that it's running DOS 3.31. This approach seems to work well; we couldn't make DR DOS 6.0 fail with any application we tried. Version 6.0 also comes with its own network shells for NetWare.

Although standard applications ran properly, we still encountered trouble with Sid, DR DOS' counterpart to Microsoft's Debug. Sid's commands are quite different from Debug's, making it impossible for you to enter utility programs and patches from magazines and books.

Also missing from DR DOS is Qbasic and an equivalent to MS-DOS' memory-based text editor, Edlin. The best substitute is to use DR DOS' Editor with the task switcher. Despite these differences, DR DOS' compatibility earns a very good score.

#### DOCUMENTATION:

DR DOS 6.0's two manuals — one for the operating system and one for ViewMax — have the same format as those for DR DOS 5.0. There's also a helpful quick-reference card. DRI continues to list error messages and give explanations in the documentation — something that Microsoft does not provide in MS-DOS 5.0's manuals.

With Version 6.0, DR DOS' on-line help has been extended to all DOS commands — both internal and external. Matching MS-DOS, DR DOS now lets you use the /? switch, as well as the /H switch, for on-line help.

For additional reference, DRI has added an on-line hypertext manual, called Dosbook. You can invoke Dosbook by typing its name at the system prompt. This utility is a boon to those

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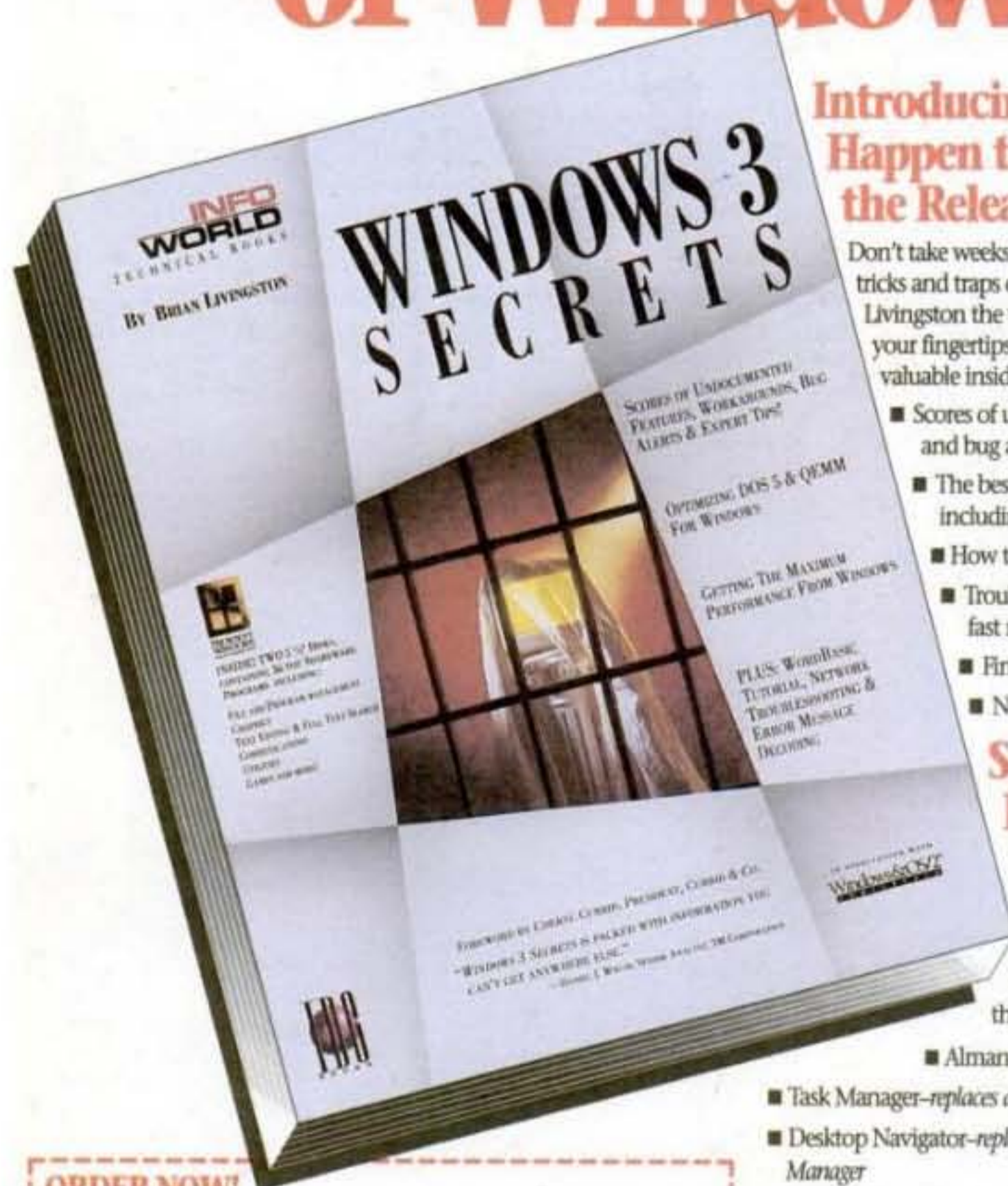
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## Microsoft DOS 5 gets new score

In evaluating DR DOS 6.0 we looked at MS-DOS 5.0 again, and found that we underscored the latter in the category of memory handling. Compared with DR DOS 5, MS-DOS 5 is very similar in functionality; both deserve the same score of very good for memory handling. In addition, we reevaluated Microsoft's technical support, which received a poor score in our July 8 review (page 61). After calling technical support this time, we found that the time it took us to be connected was much improved; this category now earns a satisfactory score. Overall, these rating adjustments raise MS-DOS 5.0's final score to 7.1. — Editors

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# KODAK

Imaging by all means



who hate rooting around for a manual when a problem arises.

The documentation, combined with the on-line help and Dosbook, earns DR DOS an excellent score in this category.

**SETUP:**

The setup program is relatively well organized, allowing you to choose your configuration via check boxes. You're given the option of optimizing your system for speed, memory space, or a compromise between the two.

For quick installations, you can simply select the default setting. If you need to uninstall DR DOS 6.0, you don't need to keep an "uninstall floppy" on hand, as you do with MS-DOS 5.0. (Your old DOS is saved on your hard disk.)

If you do not choose the quick install, DR DOS displays a long list of configuration options for fine-tuning the system. It will take a bit of time to work through the list, but most of the options give a default setting and a pick list of alternatives.

Unfortunately, the setup procedure suffers from a few glitches. First, DR DOS 6.0 insists that you install it from the A drive — a show-stopper if the B drive is the only place your floppy disks will fit. The setup program also won't let you install 6.0 over a network, which will surely make life more difficult for the corporate customer who wishes to upgrade an entire office.

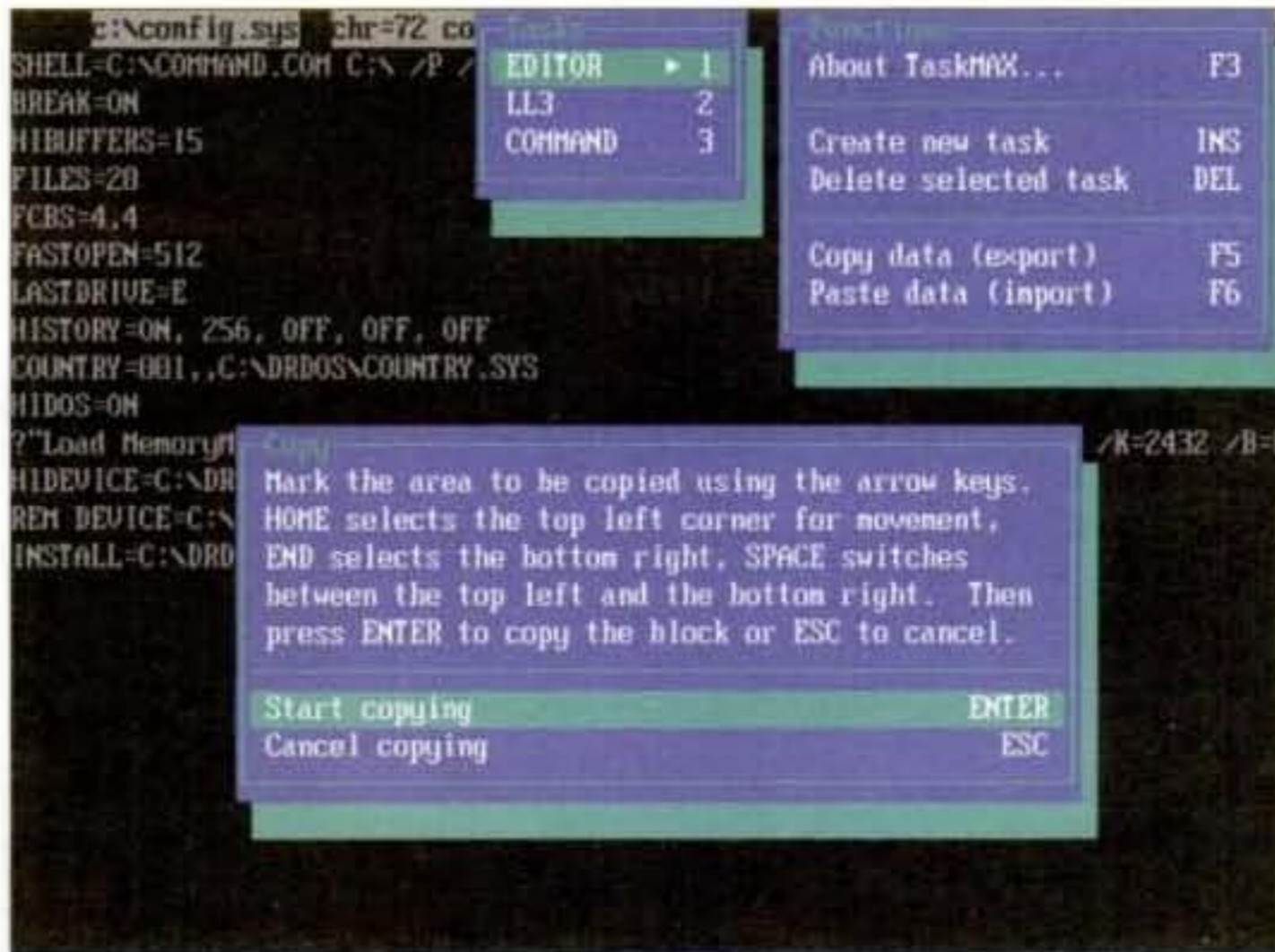
The quick-install default settings do not prepare Super PC-Kwik to work with Windows in standard or enhanced mode. This could present a problem with future versions of Windows, as Microsoft has already announced that the next version of Windows will only run in these modes.

We discovered that space staked out by Delwatch and Diskmap is not recovered during the Uninstall process. When we ran Norton's Speed Disk after uninstalling DR DOS 6.0, we discovered large numbers of unmovable files left behind by these utilities. We had to reinstall DR DOS to get rid of them.

DR DOS's setup, while flexible, may require more work than MS-DOS, especially for full Windows compatibility. It earns a good score in this category.

**EASE OF LEARNING:**

Due to the on-line documentation and



TaskMax is a TSR that can be run from the DOS command line. It swaps up to 20 applications and supports cutting and pasting data between programs.

ViewMax graphical shell, DR DOS 6.0 is easier to learn than previous versions of DOS. A plus would be an on-line tutorial. We rate ease of learning very good.

**EASE OF USE:**

DR DOS has an edge on the competition for ease of use. The task switcher is a better shell, there is better on-line help, and the two commands, Rendir and Move, replace awkward copy-and-delete sequences.

Operating TaskMax from the command line is quick and easy. It pops up in response to a hotkey sequence, and you can rapidly switch between applications by pressing Ctrl and a number key or Ctrl+ and Ctrl- (minus). You can even place commands in your AUTOEXEC.BAT file (or in any other batch file) that load tasks into TaskMax automatically.

We discovered only a few minor problems with TaskMax. When we tried to load TaskMax from the command line, we received an error message telling us we needed to load the Share program. (It would be nice if Share loaded automatically.) And if you hit the Escape key

more than once to exit the TaskMax menu, it will suddenly disappear the next time you try to call it up. The menu will continue to remain hidden until you have exhausted the extra keystrokes in TaskMax's buffer.

We rate ease of use very good.

**ERROR HANDLING:**

DR DOS has not made any significant improvement in error handling. DOS-based error messages are still terse, leaving lots of room for improvement. We rate error handling satisfactory.

**SUPPORT:**

*Support policies:* DR DOS offers a 60-day money-back guarantee and unlimited free support. Technical support is open weekdays, 8 a.m. to 5 p.m., Pacific time.

To receive help from DRI, you need to have your master disks and serial number handy when you call. Support policies rate good.

*Technical Support:* During our support calls, we averaged 12 minutes on hold before getting through to a technician. The technicians were knowledgeable and answered some relatively tough questions promptly. However, they were unable to help us with our TaskMax problem. We rate technical support satisfactory.

**VALUE:**

DR DOS has a list price of \$99 (the same price as the MS-DOS upgrade), but users who bought DR DOS 5.0 after August 8 can upgrade for just \$9.95 through November 9. Version 5.0 owners who bought 5.0 before August 8 can upgrade for \$24.95.

If you need to buy a DOS (because MS-DOS was not bundled with your hardware), DR DOS is a solid product that offers many more features than does its predecessor, MS-DOS. On the other hand, MS-DOS is slightly faster, more robust, and is the industry standard. DR DOS 6.0's features and price make it an excellent value.

Digital Research Inc., Box DRI, 70 Garden Court, Monterey, CA 93942; (800) 274-4DRI, (408) 649-3896. □

*Brett Glass was one of the original architects of the IEEE 802.5 Token Ring LAN, and is currently the host of the OS/2 conference on The Well.*

**InfoWorld Guide to Reviews**

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- Excellent = 1.0** — Outstanding in all areas.
- Very Good = 0.75** — Meets all essential criteria and offers significant advantages.
- Good = 0.625** — Meets essential criteria and includes some special features.
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- Poor = 0.25** — Falls short in essential areas.
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You can customize the report card to your company's needs by using your own weightings to calculate the final score.

Average score for all products reviewed in 1990: **6.8**.

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The editorial review board selects products for review for each cycle. If your product is selected, you will be contacted to arrange shipment of the product for review. We request two copies of software; we return hardware, but not software, after review.

Because of the volume of submissions, we regret we are unable to contact vendors regarding products not selected for review.

**APPLICATIONS TESTS**



**Disk Operating Systems**

(test times in hours:minutes:seconds)

	DR DOS 6.0	MS-DOS <sup>1</sup> 5.0	DR DOS <sup>2</sup> 5.0	MS-DOS 3.3
<b>CPU-intensive</b>	0:31:55	0:30:34	0:31:28	0:30:27
<b>Disk-intensive</b>	0:46:39	0:44:41	0:45:36	0:45:49
<b>Multitasking (Windows)</b>	0:03:39	0:03:13	0:03:32	0:03:21
<b>AutoCAD, Release 10</b>	0:05:23	0:06:16	0:05:18	0:05:08
<b>dBase III Plus 1.1</b>	0:25:20	0:24:01	0:24:56	0:24:44
<b>dBase IV 1.0</b>	0:10:36	0:10:15	0:10:01	0:10:07
<b>Lotus 1-2-3, Release 2.2</b>	0:10:10	0:09:35	0:10:03	0:09:17
<b>Lotus 1-2-3, Release 3.0</b>	0:15:00	0:13:23	0:14:45	0:14:43
<b>Paradox 386</b>	0:10:43	0:10:25	0:10:39	0:10:58
<b>WordPerfect 5.0</b>	0:01:22	0:01:20	0:01:22	0:01:19

<sup>1</sup> MS-DOS 5.0 reviewed July 8, Page 61.  
<sup>2</sup> DR DOS 5.0 reviewed May 27, Page 91.

Our applications suite of common business programs tests different aspects of system performance, including video (AutoCAD), expanded memory (Lotus 1-2-3, Release 2.2), extended memory (Lotus 1-2-3, Release 3.0), and 32-bit operation (Paradox). If you plan to buy a machine for a specific application, you should compare times for that program. Our test platform was a Compaq Deskpro 386/20e. Lower numbers indicate better performance.