F A C S I M I L E

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FAX# 011 44 488 683138 TOTAL PAGES: 1

DATE: 30 November 1990

FROM: Sue Nagoette, DRI Monterey
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RE: ROCKWELL INTERNATIONAL DR DOS 5.0 EVALUATION

John,

Rockwell International in Southern California has been evaluating DR DOS 5.0 in the hopes of standardizing on DR DOS.

They like the product very well, however today the evaluation ran into an unpleasant snag. Rockwell was under the impression that EMM386.SYS directly supported Windows 3.0 in enhanced mode, which of course it does not. Greg Haines, their chief evaluator, advised me that they will not be able to decide in favor of DR DOS 5.0 until this issue is resolved.

Direct support for Windows 3.0 is one of our most popular enhancement requests. This is extremely important for corporate customers and for the successful sales of DR DOS into "corporate America." I know you are aware of this, and that the EDC has been working on this compatiblity issue for several months.

Could you please advise me, and the others listed on this memo, when you anticipate such support will be available? If there is a problem due to lack of resources, perhaps Steve Tucker could speak with Dave Van Daele about it to see what can be done to assist you.

Thank you!

Sue Nagoette

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TO: JOHN CONSTANT

UK COPIES:
John Bromhead, Richard Gibbs

US COPIES:
Dave Van Dale, Nicole Person, Greg Ewald, Wayne Johnson, John Langford, Mike Ahern

DATE: 7 November, 1990

FROM: Sue Nagoette

RE: SUGGESTED ENHANCEMENTS FOR NEXT DR DOS

The following DR DOS enhancement suggestions have been compiled from comments made by corporate customers evaluating DR DOS, customers who have already purchased the product, and from GPOS Technical Support staff.

1. HEAVILY REQUESTED ENHANCEMENTS

A. Directly support Windows 3 under the EMM386.SYS device driver, while still permitting HILOAD, HIDEVICE, and DOS relocation.

B. True multi-tasking on 386 and higher machines; task-switching with swap-to-disk option on lower level machines (including 8088). See also the separate MULTI-TASKING section.

C. HELP available for all commands, including internal commands. This should be memo-driven and could be loadable from disk, in the same way as under Concurrent DOS.

D. Many requests to bundle or buy the product 4DOS, which is a command interpreter replacement. 4DOS offers enhanced batch file language, aliases, enhanced search capabilities (for example, the command DIR *DO.* would do a directory of all files which had the characters DO at the end of the filename), and numerous other features. In addition, 4DOS reportedly takes considerably less memory than COMMAND.COM.

E. FDISK should be able to directly handle hard drives with more than 1024 cylinders, without loading a device driver.

F. Parameter(s) passed from CONFIG.SYS to AUTOEXEC.BAT, so that the user could define different sections in AUTOEXEC which would be activated or ignored depending on options selected in CONFIG.SYS. To go along with this, activate the ? option in AUTOEXEC and other .BAT files.

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G. VIEWMAX enhancements, most commonly:
- a keyboard template
- option to run FILELINK from dialog boxes
- ability to change colors and define own icons
- ability to set and remove passwords
- option to select any file (including .BAT files) and load a user-definable editor to act on that file
- sort option to display all executables in same location regardless of actual location on the drive

H. PASSWORD enhancements:
- option to be able to execute a command but do nothing else without a password;
- password required for sign-on (even before loading CONFIG.SYS);
- administrator's "password removal kit" - not available to retail but available for a stiff fee to corporate customers, good to execute 3 times and remove as many passwords as desired each of the three times executed

I. INSTALL should support installation onto floppy diskettes of a different media size than the floppy diskette in drive A:.

2. GENERAL ENHANCEMENTS

A. MEMORY ENHANCEMENTS
- EMM386.SYS direct support for Windows 3
- All MemoryMAX commands should permit user to specify load address
- Advanced user option to pick up extra memory from graphics card
- Can EMM386.SYS be loaded at FFFF7
- Option to load EMM386.SYS in lower memory - sometimes it is smaller than network device driver and conventional memory could be improved by loading EMM386 low and driver into upper memory
- Advanced option for LIM page frame of larger than 64 KB
- Menu-driven optimizing routine to help user find "best fit" location for drivers, TSRs, etc
- Define what is in the "Reserved, upper system memory" areas displayed by MEM
- HIDOS (as in ON/OFF) name is too confusing, rename to HISYS
- HIDOS-ON parameters to move or not move buffers, etc
- Full XMS support in both HIDOS.SYS and EMM386.SYS
- Support for upper memory calls in XMS3 specification
- HIDOS.SYS must have /NOXMS option, and must look like a VDISK when in this mode.
- MEM utility should show how much extended memory has been converted to expanded memory
- Under EMM386.SYS, MEM utility should show how much extended memory is available as VCPI memory (right now, it looks like EMM386.SYS simply "eats" all the extended memory).
- LIM memory emulation should have disk-swap option (pick up additional LIM memory by swap to disk).
- HIDEVICE and HIINSTALL should first load device/TSR into low memory or LIM pageframe to determine true executable

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size, then move into best fit upper memory location.

B. DISK MANAGEMENT AND FILE HANDLING ENHANCEMENTS

- Directly support drives with more than 1024 cylinders (note that kernel support already exists, however FDISK, CHKDSK, and CACHE would have to be updated)
- Advanced FDISK options to set variable sector size
- After user selects a cylinder range, FDISK should tell the user how large a partition this will create, and allow the user to accept this size, or go back and specify a new range
- Direct support for 2.8 MB floppy diskettes
- Recognize more than 2 hard drives if supported by BIOS or controller
- Provide simplified menu-driven option for FORMAT, BACKUP, RESTORE, FDISK
- User option to store files in compressed format. This could possibly work on a timer (automatically done on files not accessed within user-definable number of days), or would be the default for all file storage, with user override option
- For tape backup units which use the floppy controller, write driver to permit these units to function as another drive (would require coordination with one or more hardware firms).
- DISKCOPY should detect previous formats and not automatically format before copying data
- FORMAT should offer automatic format switch, where FORMAT detects the size of the diskette to be FORMATTED, and formats to the size of the diskette without special parameters
- Current problems with DISKCOPY on external floppy drives must be corrected (can't DISKCOPY unless the floppy actually matches the media capacity of the drive).
- "FILETAG" option - each file could have a 64-character user-definable description, retain 8+3 character traditional DOS filename size, but the filetag would permit the user to keep a longer, more comprehensible description of file contents. Syntax might be TAG filespec /s (to set) /r (to remove), etc. Default for TAG to automatically follow file as it is copied, moved, deleted, etc. ViewMAX, DIR, and FIND should work on tags
- DIR /D for double column display - see program DDIR in DOS Power Tools book
- DIR, XDIR, TREE /E for directory by extension
- DIR /T to display filename and tag
- TYPE should offer forward and backward scrolling with PG-UP and PG-DN keys (or up and down arrows)
- COPY and XCOPY /P switch would prompt for source and destination files (copy from . . . . copy to . . .)
- DISKCOPY /C option to do a DISKCOMP immediately after the DISKCOPY
- BACKUP /M menu-driven, /C offers data compression, /D estimate number of diskettes needed
- Advanced user option for CACHE to have delayed write to improve performance
- FASTOPEN should permit parameter which allows it to function only on specified drives

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- XMM should read through the character string instead of simply discarding it - this is a difference from DOS that causes us to be incompatible with several shareware programs
- Add a timer option for batch files - /T@time - would not execute until a specific time of day - for example end of day batch file could do disk reorganization at 10pm, then a backup at 12 midnight, then a disk compression at 3 am.
- VDISK should have option to run in expanded memory as well as extended.
- MOVE command (or expanded XCOPY/E) to move directories and subdirectories to an entirely different location + switch option to create destination directory if necessary
- UNDELETE command would bring up a list of files which have been deleted, marked as to whether successful recovery would be likely or unlikely; UNDELETE should work from within ViewMAX as well.
- Add command TRUENAME (undocumented DOS 4.01 feature) which works with SUBST and ASSIGN
- ATTRIB /E should give menu-driven attributes - something like check the boxes for which attributes should be on or off
- BUFFERS should have /E option (like DOS 4.01) to allow buffers to be placed into expanded memory

c. MISCELLANEOUS ENHANCEMENTS

- User definable cursor from the command line
- INSTALL and SETUP should have a cursor option that actually shows what the cursor would look like if various options are selected
- User definable macros within ViewMAX, Editor, and from the command line
- Key combination to place control (ASCII) characters into a text file in Editor, while command history is enabled
- Enhance FILELINK to actually be a 2-PC network sharing printers, etc (there is a product called The $35.00 Network that does exactly this).
- Add mouse support to Editor and SETUP (for obvious reasons, mouse support would be difficult in INSTALL).
- Include XM common extensions in the kernal. Currently, a system loses about 32 KB for the XMGNXR file and device driver.

3. TASK-SWITCHER VS MULTI-TASKING

Most corporate evaluators and power users are asking for true multi-tasking. They seem unimpressed with the (both) DOS 3.0 task switcher, and based on knowledge of Concurrent DOS 386 abilities, are eager to see what IBM will offer. It is arguable that the regular corporate or end-user really only NEEDS task-switching. However, the PC specifiers are the ones who typically make the purchase decisions, and they want more functionality.

If we release XM DOS 3.0 with task switching only and say nothing about multi-tasking, we will look like we don't know what the industry is asking for (in other words, we look like fools). If

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we release it with task-switching only, and hint or announce that the next release will have multi-tasking, Microsoft will probably pre-announce THEIR next release, putting us in the same position we have been in since they pre-announced DOS 5.

Because of these factors, I feel strongly that the only viable way to get ahead and stay ahead of Microsoft in this arena is to offer true multitasking with the next release. A two-tier approach, in which we offer lesser functionality and task-switching on 8088/80286 computers, and advanced user options and multi-tasking on 386 and higher level machines, might be very effective. Assuming that Microsoft does in fact offer DOS 5.0 for a suggested list price of $79.00 as the press reports, a two-tiered DR DOS would permit us to drop our lower-end DR DOS into their range, while retaining premium pricing for the 386 version.

There haven't been many requests for specific functionality, except that it should be fast, easy to use, require little overhead in terms of memory, and should offer a reasonable degree of user-configurability. The closer we can come to DesqView the better - users seem to want a bundle of DesqView and DR DOS.

Some of the functionality which should be included:

A. TASK SWITCHER

- Mouse or keyboard driven, with mouse 'look ahead' for speed
- Menu of loadable choices, very easy for user to establish, with user-definable load decisions - in other words, user can define that WordPerfect loads as task 1, dBase as task 2, etc.
- Make sure that SHARE.EXE keeps track of how much LIM memory each task is using, and swaps to disk if necessary to support demands of each task
- User-definable key combination to pull a particular task to the foreground - for example, ALT-V for ViewMAX, ALT-W for wordprocessing, ALT-D for database, etc.

B. MULTI-TASKING

- Same general look and feel of the task switcher
- Must have API for professional programmers
- Several calls would be suggested:
  a. 'Where is' - program could use this to find the location of a TSR, device driver, or COMMAND.COM in memory
  b. Calls for window switching
  c. Call for background task to display an alert onto the foreground screen (beep) and leave it there for X ticks or until a key combination entered
- 'reboot' of individual windows if applications should lock up
- multiple graphics sessions

4. SUMMARY

Most users see DR DOS as a true premium DOS. They appreciate the functionality we offer, and perceive us as being more willing to

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listen to user needs than Microsoft. A very wide range of enhancements have been requested, it is true. However, judging from the changes we made between DR DOS 3.41 and DR DOS 6.0, we should not underestimate our ability to supply users with what they want.

Please let me know if you have any questions.

Mue

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