To   Andy Wightman

Copy   Steve Tucker, John Bromhead, Glenn Stephens, Mike Greenwood,
            Ian Turnbull, Malcolm Roberts, John Constant

            Jody Clifton (Monterey)
            Sue Nageotte (Provo)
            Linda Shelley (Newbury)

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The Technical Support Experience

A visit report by Richard Deane

May 11-12 1992 Technical Support US-Provo
May 14-15 1992 Technical Support US-Monterey
May 28-29 1992 Technical Support UK-Newbury

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From the sample of calls that I made, or listened-in on, it is clear that a large proportion of calls from Users to Technical Support are from Users who have relatively little experience with computers, and who do not understand a lot of the jargon and complexities of configuration

(Note to marketing. Almost every customer in the US referred to DR DOS 6 0 as "Doctor DOS", whereas in UK it was "Dee Are DOS")

Summary

My general impression of the Provo (Sue Nageotte), Monterey (Jody Clifton) and Newbury (Linda Shelley) support groups is that they are all doing an excellent job with a mix of experience levels amongst the permanent and temporary staff.

It is clear that DR DOS could be made much simpler to install, and maintain, for the ordinary user, and I suggest that increased simplicity would reduce the support burden for the product

Windows 3.1 compatibility -

No one in the US had received April Update disk sets yet, so only people with modems were able to get Windows upgrade.

A common complaint was that Windows SETUP puts HIMEM SYS into the config sys file, in conflict with our MemoryMax drivers The problem appears worse to the users than it really is because any error message scares them as they do not understand the computers and their software sufficiently

Windows put Smartdrv into the top of the Autoexec bat file even though Superpck may already be installed by the DRDOS install/setup process

Some users were getting problems , possibly because a Windows permanent swap file had been created before using SuperStor to compress the disk The users are not sufficiently aware of Window's configuration modes and have not understood that a permanent swap file would be created by default in enhanced mode. After compression Chkdsk would show some errors and also Windows would give the corrupt swap file message. It is unexplained why additional errors were found. (I've also experienced the same situation - a newly CHKDSKed disk with Windows and a permanent swap file, compress the disk and reboot, and some files are corrupt, lost clusters and invalid directory)

Users often had a problem that the parameters on Superpck were not suitable for running with Windows in the default Windows mode on their machine.

Some users had SuperStor'ed the disk so that all the space was compressed and therefore no room for a Windows permanent swap file. They then discovered this, and wondered what the simplest way to re-SuperStor was. We don't allow decompress so the user is forced to restore or re-install all the applications and data .

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Memory Management

A user had a Magnavox 386SX with NEAT and 1 Mb memory but only saw 640k. He knew nothing about NEAT until it was suggested that he had it, and that the machine ROM BIOS setup be used to configure the extra memory as extended, or use HIDOS with /chipset=neat

Users often had a problem that they had an incorrect choice of flags on EMM386 SYS, and had to be talked through the various command tail flags on the device driver. This was time consuming for Technical support personnel

There was also confusion in that the functionality of HIMEM SYS is included in our EMM386 SYS. This was apparent when customers were talking to third-party technical support, when the support staff in the other companies were not familiar with DR DOS (An example was when a non-technical customer who had an AST 5251/11 card to talk to an IBM host had to put an exclude on c800-cfff memory region on the memory manager. The AST support people asked why he was using EMM386.SYS, and said that he should have been using HIMEM SYS)

Super VGA video cards

The super VGA modes of popular cards are not properly supported by TaskMax and ViewMax

It was clear that most of the users phoning in during my visit had cheap clone computers, mostly with Super VGA. In many cases they were having problems with TaskMax or ViewMax

Superpck

The command tail parameters for Superpck are too numerous and too complicated for most users to understand. Tech support spends a lot of time talking through changes with users - co-ordinating EMM386 options with SUPERPCK options so that they both work together

It was suggested that /R 0 (Reserve All) was causing problems with support and that it should be removed. Customers were often having /R 0 and then not being able to run programs because insufficient memory was available

SuperStor

Some problems with users installing Windows on SuperStor compressed drives, without having reserved sufficient space on an uncompressed portion for a permanent swap file.

Some problems where users run SSTOR to create a compressed partition before removing any errors in disk structure with CHKDSK. Also many users don't do backups before installing a compressed partition.

Some users were making more space by deleting all the large *.SWP files - this gets rid of your compressed drive.

The concept of reserved units in SuperStor has confused people. A number were trying to use Norton Utilities to zap their reserved units to make more free space.

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Disk support

Many users seem to be using Ontrack Disk manager with DMDRVR.BIN, referred to in their existing config.sys. This entry in config.sys is lost during an upgrade to DR DOS 6.0. I would guess that similar problems could occur with users using some SCSI support drivers e.g. ASPI4DOS.SYS

A number of customers are experiencing hard disk errors on SCSI disks when running with EMM386 and SSTORDRV. Could this be a DMA problem caused by usage of upper memory?

General confusion existed amongst users with regard to the differing amounts of free space shown by DIR, XDIR and CHKDSK. It was not sufficiently clear to them that XDIR showed the logical data used and free, whereas CHKDSK showed the actual space occupied by the used clusters, and was sometimes considerably larger than the sum of the logical file sizes.

Security

A number of customers had problems with security in that they had forgotten, lost or corrupted their passwords. They needed a way to get back into the disk and access the data

Newbury Tech Support suggested that in the documentation should be a "security card", same size as a credit card, and robust, on which the user would be prompted to write their Master and User passwords. This could then be filed safely in the user's wallet, so that when they need it, the password is available. I thought that this was a very simple and probably a very workable improvement. (This could also be enhanced with the serial number and hologram label? and possible details of Tech Support Hotlines (paid or free).

Documentation

It was felt by Newbury Tech Support that the documentation could be improved to make the product easier to use. They felt that separating the manual into several smaller ones, focused on selected areas e.g. Standard DOS, DiskMax, ViewMax, TaskMax etc would be an improvement

Simplifying DR DOS

Three main areas are evident

1) Reduce complexity of EMM386 and SUPERPCK/PCKWIN.SYS - make the cache work smoothly using the provided services from EMM386. User (and install/setup) should not need to put any options on either driver for a simple, Windows-friendly installation.

2) Reduce complexity of a Windows install so that there are fewer warnings and errors (if our cache was a compatible smartdrv.exe, and if we had HIMEM.SYS and/or EMM386.SYS then perhaps we would get less problems). We need to solve the conflict of Windows stuffing its own driver names into config.sys and autoexec.bat, which conflict with our differently named drivers.

At present the user is asked many questions relating to memory management and Superpck. This is too detailed for the level of experience and expectations of many of the users

3) Improve integration of SuperStor. The SSTOR program, rather than suggesting that the user uses CHKDSK to clean up the disk, should invoke CHKDSK and/or DISKOPT to produce an error-free disk before continuing with the compress phase

It would also be sensible for SSTOR to be an integrated "overlay?" to our setup program.

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SuperStor is currently not safe if a Windows 3 1 Temporary Swap file has been created by a Windows default EASY install within the SuperStor partition. This is because the simulated FAT indicates that space is available, but the FAT only gets flooded with reserved units when the space runs out, so it is possible that the temporary swap file cannot actually get sufficient real space, and hence Windows can crash. This problem needs to be resolved.

Assisting the User

DR DOS should be much more capable of detecting the machine type and configuration, and providing the user with sensible advice, both during installation and setup, but also when using the system. This could be achieved by enhancements to Install/Setup, both in full screen mode, and command line mode, or by an equivalent new utility "ADVISE"

> e g SETUP /DIAGNOSE or ADVISE

A lot of information is being regurgitated each day to customers by Tech Support staff - simple things, about optimising an installation of DR DOS, and setting suitable option parameters on the various device drivers and MemoryMax. This information needs to be available directly to the user without requiring recourse to DR DOS technical support

e g.

Sensible defaults of processor type, supporting chipset types and memory management to cater for Windows, Superpck and the actual memory installed.

Running SETUP /DIAGNOSE or ADVISE would force a command line driven mode which would analyse current setup and provide warnings if any AUTOEXEC or CONFIG settings appeared to be incorrect, or very far off optimal. It would be configurable as to whether a particular warning is given each time SETUP /DIAGNOSE or ADVISE is invoked (ie on every startup) or whether the message just appears once and then is quiet. This caters for those users who have deliberately selected something which would cause a warning

SETUP /DIAGNOSE /VERBOSE or ADVISE /VERBOSE would also list some aspects of the machine configuration which might be of assistance to technical support.

> e g. Processor Type
> Coprocessor
> Support Chipset Neat /SCAT etc.
> Extended Memory
> Bus type e g. ISA/EISA/MCA
> Video Type e.g. MDA/HGA/EGA/VGA/SVGA/XVGA
> ROM BIOS name, date and version
> Details of attached disks.
> Others as necessary

Example :-

286 computer and supported chipset type and Windows?
Yes - Does there appear to be 640k of memory only ? - Perhaps user needs to run BIOS setup for shadow disable if machine actually has 1 Mb of memory as Windows in Standard mode requires at least 256k extended memory.

286 computer and supported chipset type with 384k extended memory and no Windows?
Yes - Perhaps you would get better TPA if this 384k was mapped with shadow enable to give upper memory, and run with HIDOS /BDOS=AUTO

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286 computer and no supported chipset type i.e. plain AT?
With extended memory ? - Use HIDOS /BDOS=FFFF

386/486 computer ?

< 2 Mbytes extended memory. Windows will run in Standard mode Ensure that Superpck and
memory manager are optimal for running Windows in Standard mode

> = 2 Mbytes extended memory - can run Windows in Enhanced mode Ensure that Superpck
settings can lend at least 2M bytes to Windows

>= 3 Mbytes extended memory - can run Windows in Enhanced mode Superpck can have some
memory reserved to it, but ensure that at least 2 Mbytes are available to Windows

8088/8086? - Check if LIM driver loaded, check if LIM 4 compauble, if so check if HIDOS
/Chipset=EMSUMB is configured run after LIM entry in config sys. Check if LIM driver provides
Superpck-compauble LIM (i e. driver is re-entrant) Warn user and disable Superpck if LIM driver
not compatible.

Is Windows found via the path ? If so check and correct if necessary that DR DOS memory manager
is configured appropriately Check that HIMEM.SYS is not also in config sys Check that Superpck is
configured appropriately Check that SMARTDRV EXE and Superpck not both in autoexec bat If
both then remove SMARTDRV entry If SMARTDRV was removed from autoexec bat check that
SMARTDRV /double buffer in config sys is also removed.

If SuperStor is configured , check that the Permanent and Temporary Swap files exist in suitable
locations (dependant on appropriate SuperStor support), and allow creation if necessary.

Windows Permanent Swap File support - The SuperStor utility can know that a Permanent Swap File
exists by analysis of the Windows " INI" files, and can be enhanced so that it deletes and recreates
the Permanent Swap file within the SuperStor partition The DR DOS setup program (or ADVISE
utility) can be enhanced so that if Windows is installed subsequently then a correct Windows
Permanent Swap File can be created

Windows Temporary Swap File support - The SuperStor utility can know that a Temporary Swap File
exists by analysis of the Windows " INI" files, and can be enhanced so that it correctly supports the
Tempory Swap File within the SuperStor partition, or as a minimum reconfigure the Windows " INI"
file so that the Temporary Swap File is deleted. The DR DOS setup program (or ADVISE utility)
can be enhanced so that if Windows is installed subsequently then a correct Windows Temporary
Swap File can be created.

The above examples are typical of the type of information that the DR DOS SETUP or ADVISE
program could provide. It could be enhanced to also inform the user of other relevant information
such as the percentage defragmentation on the physical disk, or SuperStor disk.

It could pick up on conflicts between EMM386 and SUPERPCK/PCKWIN

It could dump relevant information such as processor type, amount of memory, rom bios version,
current config, and autoexec files to disk, so that a user could easily provide the correct information
to technical support. In this role it would be like Manifest or Microsoft Diagnostics

It could be made to do integrity checking of the DRDOS system files, by being embedded with
knowledge of checksums, and identity of files, so that it could perform an anti-virus role. This would
also identify to Tech Support that the user was using the correct versions of all DR DOS system
components.

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I believe that these enhancements to SETUP (or creation of an ADVISE utility) would assist the user, and by doing so would reduce the support calls to Tech Support

The detailed design of these additional features would need strong input from Tech Support so that it focuses on the most frequent and important problems

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