MS-DOS 5 Upgrade Product Support Plan

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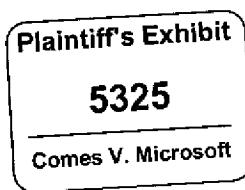   Carrine Greason
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        DOS Marketing

From: Richard Freedman

Date: July 26, 1991

Summary/Recommendations

Over the last 7 days, customers have had a much easier time getting through to DOS product support. However, we are expecting renewed sell-through in the fall, and since we do want to lower PSS costs, the DOS product group and product support group recommend the following:

* Quick Help: an automated 206 service that faxes or mails back detailed procedural answers to common questions (to be announced as part of a momentum ad campaign)
* 206 modem download service for downloading the same procedural answers
* Cobb group ad campaign for their Inside DOS newsletter that will answer common MS-DOS q&a

A host of other tactics are mentioned below as well. In addition, we're working on MS-DOS 5.0a for October release, and its primary objective is to reduce call volumes. In combination with our other tactics, our goal is to reduce call volumes 20%.

Introduction

After three weeks of jammed lines, the DOS PSS service level has improved dramatically:

Dates	Busy Signals/Day	Busy-Out Ratio
6/17 - 7/9	25,000 - 35,000	~97%
7/10 - 7/16	7,000 - 15,000	~91%
7/17 - 7/23	4,000 - 7,000	~70%

Busy signals dropped dramatically because sell through has leveled off and capacity has increased from 800 calls/day to 1,300 calls/day. Capacity increased because we went from 67 technicians to 84, and because call times decreased from 17 to 14 minutes.

Translating busy signals to actual call volume is quite tricky because there is an exponential effect: the harder it is to get through, the greater the number of people who put their phones on auto-dial. So, on 7/24, to determine for certain how many customers were actually calling, we opened up the queue and did not busy out anyone. The results were encouraging:

* 1,347 people called and 1,321 were handled, meaning only 26 people (1.9%) abandoned
* Average delay: 77 seconds
* Customers serviced in under 60 seconds: 72%

It appears that call volumes are under control.

DOS PSS Plan Summary

Going forward, we have two objectives:

* Reduce the number of calls to 206 technician support
* Cut call times

The 10 most common calls account for 25% of our call volume; the top 25 account for over 40%. Therefore, I estimate that the tactics proposed below would reduce call volume 20% in addition to cutting call times. Aside from MS-DOS 5.0a, we will have the key tactics - automated services - ready to go by September 1.

Objective: Reduce Call Volume

Appendix 2 describes these tactics in more detail.

Tactic	Description
MS-DOS 5.0a	Fix frequent and dangerous bugs, about 20 in total Revise the Getting Started manual to reduce call volume
206 Quick Help	Quick Help notes for common problems via an automated fax-back system or via mail. Voice answers to common Q&A
206 Download Support	Quick Help notes via modem
Advertising	Maintain momentum with ads using positive industry quotes Promote new 206 automated services in ad
Cobb Group Advertising	Ads answering common MS-DOS 5 Q&A in Ziff publications
Cobb Group Direct Mail	Direct mail for the Inside DOS newsletter that will include answers to common q&a
Magazine Articles	Tips & Tricks articles
DOS Day Seminars	Focus on common Q&A at seminars
User Groups	Distribute tech notes thru newsletters & BBS

In addition, should call volumes increase dramatically, or should we need a PR win, a showstopper option is to place the automated services - Quick Help and Download Support - on 800 numbers.

Objective: Shorten Call Times

Tech Lunches	DOS Group holds lunch time discussions at PSS
Call-Back Policy	For time-consuming procedures, tell user what steps to take and promise to call back shortly
Fax-back button	Give techs a "button" to fax out app notes
KnowledgeBase Fest	Build up quality and quantity of KB articles

Support Analysis
The ultimate objective is to provide support services that satisfy all customers, and provide them as cost-effectively as possible.

Call volumes depend on three key factors -
* Sell through: predicted fall orders indicate a sell-through of as much as 400,000/month through December 1991
* Call capacity: currently 17 calls/tech/day. With productivity improvements, I estimate this will reach 20/day by September
* Calls/unit: current stats indicate .10 calls/unit

400,000 units/month * .10 calls/unit   = 40,000 calls/month
           = 2,000 calls/day

Minus 20% using above tactics   = 1,600 calls/day   **CONFIDENTIAL**

1,600 calls/day / 20 calls/tech/day   = 80 techs needed long term

Between Bellevue and NC, we are scheduled to staff up to 120 techs by 9/8 but lose 25 by 11/1 to Win 3.1, leaving 95. I recommend sticking to this staffing plan to provide flexibility in case fall sell-through increases well above today's levels. I don't recommend hiring more techs, and if sell-through drops PSS indicates that new products will be able to absorb as many techs as necessary.

Appendix 1 - Common Questions
The 10 most common questions are:

1. Setup hangs, but manual install from floppies works	5.5%	232 calls week of 7/15
2. ATI Wondercard BIOS bug botches Setup	3.8%	159
3. What is Disk Manager? How do I replace?	3.7%	156
4. Himem.sys: /machine solves problem	2.6%	109
5. How do I repartition my disk into one partition?	2.4%	101
6. Incompatible non-MS mouse driver; update needed	2.4%	100
7. How do I load programs high?	2.2%	94
8. Setup bug: Wrong .vid driver installed on mono PC	2.1%	89
9. Problem installing from drive B:	2.0%	87
10.Incompatible MS mouse driver: update needed	1.9%	82
	28.6%	

Appendix 2 - Tactic Details

MS-DOS 5.0a
Detailed call-tracking data from PSS indicates that certain specific problems are constantly recurring. We will solve most of them in documentation: for example, many customers don't know how to repartition their disk. The remaining frequent problems are caused by bugs which we will fix. We'll also fix the infrequent but dangerous data-loss bugs. Total fixes: about 20 bugs.
* Status: Planned for simultaneous release with ROM DOS 5 in October

206 QUICK HELP
Customers calling this number will choose Quick Help notes - procedural solutions designed for the average user - from a menu of common questions and then have them faxed or mailed. Our existing automated voice system on 206 would also be on this line. The reg card would change to position this as the customer's first support option. Since fax-back will cost .50/call, we will use an automated check to verify the user's serial number before letting them into the system.
* Cost estimate: 48-line capacity already in place for existing AVS. Fax cost: .50/fax-back
* Status: PSS needs 30-45 days to implement. Tech notes being written - will require 30 days

206 DOWNLOAD SUPPORT
Would offer the same tech notes as above, except via modem.
* Cost estimate: $10,000 to set up 8 lines
* Status: 2 weeks to set up modem server. Tech notes are critical path

800 AUTOMATED AND DOWNLOAD SUPPORT (OPTIONAL)
Should our estimate of .1 calls/unit change or prove low, and if sell-through remains high at 400,000/month, then we will need a showstopper option ready to go. This option is to shift all automated support (Quick Help, Download Support) to an 800 line to make them a

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MSC 00044732

RBC 002790

compelling first service option for customers. Since the busy-out has declined to an
acceptable level, we think 800 now is unnecessary.
* Cost estimate: $2/call

PC WEEK/INFOWORLD ADVERTISING
This ad would have two aims: sustain momentum using quotes from the press and users, and
shift call volume by announcing our new 206 Quick Help service.
* Cost estimate: $800,000, but this includes momentum component also
* Status: Creative brief done. Ads to begin first week September

COBB GROUP ADVERTISING
The Cobb Group will run a series of ads answering our common Q&A and promoting Inside
DOS in Ziff publications. They will also begin answering our common Q&A in more detail
in Inside DOS.
* Cost Estimate: Payment-in-kind. Cobb will mail our reg base
* Status: Cobb has our common q&a. Media scheduled for fall

COBB GROUP DIRECT MAIL
Cobb plans to drop 2,000,000 pieces of direct mail promoting Inside DOS in the fall. In some
they will answer some common q&a to entice potential subscribers.
* Cost and Status: Same as above

MS-DOS 5 TIPS AND TRICKS MAGAZINE ARTICLES
PR has sent out feelers on this already.

USER GROUPS
We'll distribute the tech notes to user groups for newsletters and BBSes.

DOS DAY SEMINARS
17 seminars are already scheduled nationwide in September and October. They are targeted
at corporate PC people; total attendance will be 4,000. Part of the seminar will focus on
common q&a.

TECH LUNCHES
DOS development, program mgmt and product mgmt have been giving lunchtime tech talks
at PSS on common topics for the last few weeks. The talks are videotaped and topics written
up as Knowledge Base articles. They'll continue as long as needed.

CALL-BACK POLICY
Some customer calls require simple but lengthy fixes. The techs will ask that customer hang-
up, try it themselves, and promise to call back and check-in shortly.

FAX-BACK BUTTON
Implement a button in Prism, the PSS data base front-end, that lets techs quickly fax tech
notes to users asking common questions that don't require a live technician.

KNOWLEDGE BASE FEST
Have the entire DOS Group spend two days "scrubbing" and writing KB articles.

From jimpe Thu Jun 20 15:07:41 1991
To: bradc
Cc: pattys terrian
Subject: Dos 5 Support Update
Date: Sun Jun 23 16:02:05 PDT 1991

Date: Thu Jun 20 14:05:12 PDT 1991

Brad:
Here are the numbers we have so far on support. The bottom line is the
call times right now are over twice as long as predicted, thus cutting
our call handling in half. We are looking at this from many angles to
come up with alternatives. I would like to have you and/or Rich
participate in some brainstorming. We would like your perspective.

Planned call handling in June	1945 per day
Current call handling	1044 per day
Planned call times	8 minutes per call
Current call times	> 17 minutes per call
Planned labor minutes	15,560 minutes a day
Current labor minutes	17,226 minutes a day
Average time for serialization	1.37 minutes per call
% busy	~96%
# attempts	> 27,000

    (means lots of attempts to get through and we think
     demand is closer to 3,500-4000)

Repeat callers   ~25% have called more than once

Calls handled by AVS   ~84 a day (we're sure of - 12%
                                    of those using it and
                                    possibly another 84 (12%)
                                    that just hang up after
                                    getting an answer)

Average delay   6 minutes (this is bad and is
                                    controllable, we are
                                    learning and reducing)

CompuServe   2.5 FTE's working on it
                                    threshhold set to 1000
                                    Last week we had 2159 messages
                                    (from your email it looks like
                                    that may have jumped up)

    Top problems are 1. Tandy and PS/1 incompatibilities (burned in
config.sys); 2. Problems installing and recognizing entire hard drive
when partitioned using 3rd party partitioning software
(On Track, etc.); 3. Problems installing and recognizing entire hard
disk storage available on systems with multiple physical hard drives.

Terri is working on an issues list right now. We look forward to you
and Rich coming down. We need help sorting out the issues, getting good
answers, writing KB articles, and perhaps doing some training on some
areas we didn't prepare for. Terri is developing more defined set of
things for you here.

-Jim

DOS MEETING AGENDA - JUNE 25, 1998

I. Current state of affairs: DNIS stats [JimPa/BradC]
    - DOS sell-through
    - Call volumes
    - Talk times
    - Call coding

II. Product Issues [DOS team mgrs]
    - Top issues:
        trends: h/w & s/w incompatibilities, EMM386, failed setups,
            DOSSHELL crashes
        timeframe for resolutions
        Beta issues - did we miss something?
    - Supporting the DOS 5.00 product: is 8 min. talk time realistic?
        Setup (expanding files, Disk Manager - must walk novice through)
        Memory management
        Multiple questions
    - CIS volume (w/o 6/10: 2159 messages vs 1335 for Win; 89 for April)
    - Team's productivity (100% predicted labor)

III. Plans to address support issues [DOS team mgrs/BradC]
    - Escalations to campus (include RichF?)
    - Development. visits: taking calls, tech lunches, organization, recommendations
    - Development handling callbacks/escalations (SteveB idea)
    - Knowledgebase articles, appnotes
    - CIS staffing
    - Busy-outs
    - Training/staffing forecasts
    - Incompatibilities
    - Access to DOS source, specs and technical papers

IV. Campus Issues [Brad, Rich, Eric]

V. Brainstorm - anything else we should be doing?

VI. Phone listening: Rich, Brad, Eric

Product Name Questions (Qs)	Avg # Talk	# of Qs	% of Total	Incoming Resolution Summary 0	1	2	3	4	5	6	Result of: Call	Ltr	SR	Total	Outgoing Total	% of Resolution Summary 0	1	2	3	4	5	6	Percent Of Calls In	Out
MS-DOS OPERATING SYSTEM(096)																								
(00) Command Usage	0.8	7	0.3	7	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0100.0	0.0
(01) Upgrade Install:Setup usage/Problem	13.7	696	30.1	20	574	2	62	37	1	0	43	1	2	44	23.6	1	24	0	2	17	0	0 93.8	6.2
(02) Uninstall: Unistall usage/Problems	10.9	31	1.3	1	28	0	2	0	0	0	2	0	0	2	1.0	0	1	0	0	0	0	0 93.9	6.1
(03) Networks: Upgrading redirectors	14.8	68	2.9	0	49	0	7	12	0	0	7	0	0	7	3.6	0	4	0	1	2	0	0 90.7	9.3
(04) Disk Partitioning	13.5	155	6.7	2	125	0	20	8	0	0	10	0	0	10	5.1	0	4	0	3	2	0	0 93.9	6.1
(05) Memory Management	16.6	291	12.6	8	244	1	29	9	0	0	6	0	0	6	3.1	1	4	0	0	1	0	0 98.0	2.0
(06) MS-DOS Shell/Task Swapper	15.5	77	3.3	4	55	0	6	12	0	0	8	0	0	8	4.1	0	3	0	2	3	0	0 90.6	9.4
(07) Utilities, Commands, Device Drivers	12.3	203	8.8	5	178	0	13	7	0	0	24	0	0	24	12.3	2	13	8	5	4	0	0 89.4	10.6
(08) Dos 5 and Windows	18.8	148	6.4	16	103	0	15	14	0	0	14	0	0	14	7.2	2	9	0	1	2	0	0 91.4	8.6
(09) Hardware/Software Incompatibility	13.4	312	13.5	17	208	3	59	21	4	0	14	0	0	14	7.2	0	7	0	1	6	0	0 95.7	4.3
(10) Other	8.6	323	14.0	8	289	0	19	7	0	0	54	1	0	55	28.2	0	38	0	1	15	1	0 85.4	14.6
(11) Upgrade Installation	0.0	1	0.0	0	1	0	0	0	0	0	2	0	0	2	1.0	0	0	0	0	0	0	0 33.3	66.7
(14) Uninstall	0.0	0	0.0	0	0	0	0	0	0	0	1	0	0	1	0.5	0	0	0	0	0	0	0 0.0	100.0
(15) FORMAT problems	2.3	1	0.8	0	1	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0100.0	0.0
(21) User's menus	0.0	0	0.0	0	0	0	0	0	0	0	1	0	0	1	0.5	0	0	0	0	0	0	0 0.0	100.0
(S1) Repeat caller-same problem	0.0	0	0.0	0	0	0	0	0	0	0	5	0	0	5	2.6	0	5	0	0	0	0	0 0.0	100.0
Coding Totals	13.5	2313		88	1855	6	232	12	5	0	191	2	2	195		6	112	0	16	52	1	0 92.2	7.8

Total MS-DOS OPERATING SYSTEM * 2521 *

Product Name Questions (Qs)	Avg # Talk	# of Qs	% of Total	Incoming Resolution Summary 0	1	2	3	4	5	6	Result of: Call	Ltr	SR	Total	Outgoing Total	% of Resolution Summary 0	1	2	3	4	5	6	Percent Of Calls In	Out
MS-DOS OPERATING SYSTEM(096)																								
(00) Command Usage	5.0	3	0.1	3	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0100.0	0.0
(01) Upgrade Install:Setup usage/Problem	15.4	543	24.7	19	458	0	51	15	0	0	42	0	1	43	17.8	1	21	0	0	19	0	0 92.7	7.3
(02) Uninstall: Unistall usage/Problems	16.4	14	0.6	2	10	0	2	0	0	0	2	0	0	2	0.8	0	2	0	0	0	0	0 87.5	12.5
(03) Networks: Upgrading redirectors	15.7	49	2.2	2	31	0	7	8	1	0	4	0	0	4	1.7	0	1	0	0	2	1	0 92.5	7.5
(04) Disk Partitioning	14.0	178	8.1	10	141	0	22	4	1	0	15	0	0	15	6.2	0	5	0	3	7	0	0 92.2	7.8
(05) Memory Management	14.9	325	14.8	13	245	1	33	13	0	0	19	0	0	19	7.9	1	7	0	6	5	0	0 94.5	5.5
(06) MS-DOS Shell/Task Swapper	15.1	121	5.5	11	82	0	17	11	0	0	10	0	0	10	4.1	0	4	1	0	5	0	0 92.4	7.6
(07) Utilities, Commands, Device Drivers	11.7	161	7.3	8	133	1	14	5	0	0	6	0	0	6	2.5	0	4	0	0	2	0	0 96.4	3.6
(08) Dos 5 and Windows	20.4	110	5.0	6	87	1	6	10	0	0	25	0	1	26	10.8	2	13	0	1	9	0	0 80.9	19.1
(09) Hardware/Software Incompatibility	15.3	320	14.6	23	208	1	65	18	4	1	39	0	1	40	16.6	2	16	0	3	18	0	0 88.9	11.1
(10) Other	8.8	370	16.8	6	334	0	19	11	0	0	62	0	0	62	25.7	0	37	0	6	12	0	0 85.6	14.4
(11) Upgrade Installation	0.4	1	0.0	0	1	0	0	0	0	0	1	0	0	1	0.4	0	0	0	0	0	0	0 50.0	50.0
(14) Uninstall	0.0	0	0.0	0	0	0	0	0	0	0	1	0	0	1	0.4	0	0	0	0	0	0	0 0.0	100.0
(S1) Repeat caller-same problem	0.0	0	0.0	0	0	0	0	0	0	0	12	0	0	12	5.0	0	12	0	0	0	0	0 0.0	100.0
(95) 900# complaint	18.6	1	0.0	0	1	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0100.0	0.0
Coding Totals	14.0	2196		103	1751	4	236	9	6	1	238	0	3	241		6	122	1	19	79	1	0 90.1	9.9

Total MS-DOS OPERATING SYSTEM * 2512 *

Resolution Summary Key:
0 - Limitation of Software   3 - Possibly solved
1 - Solved by Explanation   4 - Unresolved/Callback
    Sent Appnote or File   5 - Need Update
2 - Bug (Known, reproducable)   6 - Disconnected

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DOS STATS

	DOS 5.00 TOLL LINE					DOS 900/ LINE					DOS C C LINE				AVS		CUST INFO			DNIS
	Staff Size	Calls Offered	Calls Handled	Avg Delay	Avg Call	Staff Size	Calls Offered	Calls Handled	Avg Delay	Avg Call	Calls Offered	Calls Handled	Avg Delay	Avg Call	# Calls	% Answered	# Registered	Avg # Calls/Cust	Talk Time	Busy/ Attempts
11-Jun	43	562	525	190.6	15.3	10	117	82	63.1	6.5	12	12	135.1	17.1	223.0	14.5%	446		NA	0.77
12-Jun	42	995	762	758	15.9	11	167	108	86.3	7.6	14	13	171.9	13.9	388.0	14.6%	745		NA	0.87
13-Jun	40	974	669	1039	16.1	11	220	145	47	5.9	9	9	156.0	21.5	438.0	11.9%	754		NA	0.92
14-Jun	40	834	627	909.1	17.9	12	207	137	74.1	6.0	3	2	303.5	18.0	462.0	11.4%	634		NA	0.94
17-Jun	53	1064	911	658.4	17.6	14	235	120	116.2	8.1	20	13	598.1	16.5	702	12.3%	1663	1.37	NA	0.96
18-Jun	54	1014	867	546.9	16.5	16	225	155	45.9	7.1	6	6	105.0	13.6	642	10.2%	•		0.9	0.95
19-Jun	52	978	865	540.9	17.5	15	254	187	38.6	5.9	10	8	30.3	7.8	654	12.2%			NA	0.96
20-Jun	56	845	772	664.1	16.7	12	201	156	87.2	7.2	15	15	36.7	14.7	712	8.4%			0.7	0.97
21-Jun	57	987	865	620.4	17.4	12	240	134	107	7.9	17	14	234.4	14.6	694	11.4%				0.96

6/25/91

MS-DOS5 issues and questions that we need your help with:

Issue: Tandy/PS1 incompatibilities - "May render system unstable or unusable after upgrade"

    Resolution: Information and training on how to recognize ROM DOS.
    Resolution: Information from Tandy how to change the ROM DOS machines so they boot from the hard disk instead of the ROM.

Issue: EM386.EXE seems to slow down performance on PCs, regardless of brand. Is this normal? Is so, does it happen all the time, or are there exceptions? What are they?
(turning off shadow ram will speed the machine up close to normal speed in some cases)

    Resolution: Development has done some testing on this, we'd like a copy of the results.

Issue: Windows won't run in standard mode with UMB's. (This is NOT a bug, it's a major support issue. Our customers run in standard mode because it's faster than enhanced or their apps. only run in standard mode. QEMM enables Win3 to run in standard mode but their fix actually modifies Win3 code, so we can't talk about why it works.)

    Resolution(s):   Make Windows 3.1 VCPI compliant so that it will run with EMM386 active. Or (bad hack) have DOS5.00a include an EMM386 that modifies the Windows runtime, (similarly to QEMM) AND have Windows 3.10 include an EMM386 that modifies the Windows runtime similarly.

Issue: Video problems with monitor/card mismatches (ega, cga, vga) Customer unable to read screen images and can't complete setup. Need to walk through setup using /u or other switches to force monochrome. (The problem with this is that some machines won't even run if setup is forced into monochrome mode.)

    Resolution: We need a means of getting things to work.

Issue: Does the setup program for the DOS5 upgrade product alter CMOS settings? (It appears that this occurs with Gateway 2000 computers. Is there any way that setup could accidentally alter CMOS settings?)

    Resolution: We need information and training on DOS5 and it's interaction with CMOS.

Other Training Topics/Questions:

1.) Is there any reason why a file named DOS.SWP should be created at the end of installation of the DOS5 upgrade product? Does the DOS5 upgrade product's setup program create it? If so, why doesn't it get rid of the file at the end of installation, as it appears to do on "normal" installations?

2.) Some problems have been solved just by placement of device-setver.exe before the device = himem.sys statement. Is there a perfect order for the device drivers?

3.) We need a list of mouse drivers version tested with MS-DOS5 with pass/fail results.

4.) How do we explain that QEMM does a better job of memory management than HIMEM? What versions of QEMM were tested with MS-DOS5? Which versions passed/failed?

5.) We need a list printers tested with MS-DOS5 with compatibility.

From naveenj Mon Jun 24 19:44:06 1991
To: ericst
cc: adriank bradc bradsi mikedr naveenj richf steveb tomle
Subject: DOS 5 HOT LIST.
Date: Tue Jun 25 10:35:45 PDT 1991

Date: Mon Jun 24 19:43:33 1991

Following is an overview of the problems that we have discovered after
MSDOS 5 release. Please let me know if you need detailed information on
any of the following problems.

Adaptec ESDI controller with SpeedStor driver - Data Loss.

     Upgrade on a system with Adaptec 2322 A/B ESDI controller with SpeedStor
driver makes system unbootable. UNINSTALL results in a serious damage
to the disk and loss of data. This problem would also happen if
SpeedStor driver is used to support disk with geometry not supported
by system ROMBIOS.

     In both the cases, Logical disk geometry is stored in the Master
boot record (MBR) which is replaced by MSDOS 5 upgrade.

BSR Systems - Data Loss

     Upgrade on a BSR system (distributed by consumer electronic giant DAK)
with 40B/80MB (most popular configs) makes system unbootable.
UNINSTALL would result in a data loss. These systems have disk
geometry information stored in the MBR which is replaced by DOS 5
upgrade.

Task Swapper bug - Potential Data Loss

   There is a bug in DOS task Swapper that could potentially lead to
 data loss. This bug shows up in following two cases

     - Once a user runs any application that uses Asynchronos
      NetBios APIs (e.g. VTP, SQL DB) from the DOS window
      in the Task swicher, any other application after this would
      exhibit unforseen behaviour or result in a data loss
      during task switch.

     - Task switching when a user is running Novell Network or Lan
      manager (enhanced) would exhibit mysterious behaviour or could
      result in a data loss.

Setup on a monochrome system - System hang

     When a user runs an upgrade on systems with a monchrome
adapter, Setup hangs in some systems (e.g Zenith but not
IBM and Compaq). DOS Shell would always hang on all systems
including IBM and Compaq.

     This problem is caused because Setup detects mono systes as CGA and
copies the wrong video files fot the dos shell.

LoadHigh and Networks - Loss of functionality

     User is unable to load any TSR in the UMB after running Net5.

This bug would also show up in Banyan VINES and Lantastik networks.

This bug appears because these networks load/execute applications by themselves and do not have DOS EXECer's memory allocation logic to load TSR in UMBs.

AutoCad and extended memory - Incompatibility

AutoCAD release 10 does not work when DOS is loaded high. This bug is due to the fact that AutoCAD does not understand Vdisk header placed by DOS 5 kernel to protect DOS code and data in HMA.

DELL systems --- Incompatibility

Some Dell systems running DELL DOS 3.3 appear to upgrade fine but DOS 5 doesn't see all the logical drives.

FORMAT utility -- Incompatibility

On IMTEC 486/25 system with IDE controller and AMI BIOS, format does not recognize floppy drive as a high density drive. it works fine under DOS 3.3 and DOS 4.01

From naveenj Mon Jun 24 19:44:06 1991
To: ericst
Cc: adriank bradc bradsi mikedr naveenj richf steveb tomle
Subject: DOS 5 HOT LIST.
Date: Tue Jun 25 10:35:45 PDT 1991

Date: Mon Jun 24 19:43:33 1991

Following is an overview of the problems that we have discovered after
MSDOS 5 release. Please let me know if you need detailed information on
any of the following problems.

Adaptec ESDI controller with SpeedStor driver - Data Loss.

    Upgrade on a system with Adaptec 2322 A/B ESDI controller with SpeedStor
    driver makes system unbootable. UNINSTALL results in a serious damage
    to the disk and loss of data. This problem would also happen if
    SpeedStor driver is used to support disk with geometry not supported
    by system ROMBIOS.

    In both the cases, Logical disk geometry is stored in the Master
    boot record (MBR) which is replaced by MSDOS 5 upgrade.

BSR Systems - Data Loss

    Upgrade on a BSR system (distributed by consumer electronic giant DAK)
    with 40B/80MB (most popular configs) makes system unbootable.
    UNINSTALL would result in a data loss. These systems have disk
    geometry information stored in the MBR which is replaced by DOS 5
    upgrade.

Task Swapper bug - Potential Data Loss

    There is a bug in DOS task Swapper that could potentially lead to
    data loss. This bug shows up in following two cases

        - Once a user runs any application that uses Asynchronos
          NetBios APIs (e.g. VTP, SQL DB) from the DOS window
          in the Task swicher, any other application after this would
          exhibit unforseen behaviour or result in a data loss
          during task switch.

        - Task switching when a user is running Novell Network or Lan
          manager (enhanced) would exhibit mysterious behaviour or could
          result in a data loss.

Setup on a monochrome system - System hang

    When a user runs an upgrade on systems with a monchrome
    adapter, Setup hangs in some systems (e.g Zenith but not
    IBM and Compaq). DOS Shell would always hang on all systems
    including IBM and Compaq.

    This problem is caused because Setup detects mono systes as CGA and
    copies the wrong video files fot the dos shell.

LoadHigh and Networks - Loss of functionality   MSC 00044742

    User is unable to load any TSR in the UMB after running Net5.   CONFIDENTIAL

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This bug appears because these networks load/execute applications
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but DOS 5 doesn't see all the logical drives.

FORMAT utility -- Incompatibility

On IMTEC 486/25 system with IDE controller and AMI BIOS, format
does not recognize floppy drive as a high density drive. it works
fine under DOS 3.3 and DOS 4.01

From naveenj Mon Jun 24 15:12:21 1991
To: ericho nancysp sharonm terrian
Cc: bradc bradsi ericst tomle
Subject: DOS 5.0 setup.exe and SpeedStor
Date: Mon Jun 24 15:22:22 PDT 1991

Date: Mon Jun 24 15:09:00 1991

Please advise PSS technicians not to advise UNINSTALL if a user experiences
problems with upgrade using ADAPTEC 2322 ESDI controller running SpeedStor
driver.

UNINSTALL would cause serious data loss and may make disk unreadable.

detail report follows.

> >From naveenj Fri Jun 21 17:29:01 1991
> To: ericst tomle
> Cc: bradc bradsi ericho johnhe mikedr nancysp richf toddm
> Subject: DOS 5.0 setup.exe and SpeedStor
> Date: Fri Jun 21 17:28:50 1991
>
>
>
> Storage dimension tells me that there is an incompatiblity between their
> device driver and DOS 5 upgrade. This problem shows up on the latest
> Adaptec controllers. This would also explain why PSS has been getting many
> calls from the customers using Adaptec ESDI controllers or /bootall option
> in SpeedStor driver.
>
>
> Background:
> -----------
>
> The /BootAll option allows the DOS partitions to use the full geometry of
> the disk when the CMOS drive table would otherwise limit the geometry; i.e.
> DOS partitions would use the full capacity of the drive instead of only a
> very small portion of it. Its use is not generally recomended due to
> potential problems when booting from a floppy without the SpeedStor driver.
>
> /BootAll is enabled by default whenever a 2322 (A or B) board is detected
> by SpeedStor version 6.0.3 or later - unless the /2322A switch is used, in
> which case /BootAll is not enabled when a Adaptec 2322 board is found (it
> is not possible to tell a B board from an A board via software). In all
> other circumstances save these, it must be enabled manually.
>
> Why does SpeedStor enable /BootAll for the 2322B board? The B board will
> enter a translation mode if a geometry with 17 sectors per track is used in
> the CMOS setup area. This mode reduces the effective capacity of the
> drive. Once engaged, it cannot be changed; using /BootAll ensures that
> this mode will never be entered.
>
>
> The DOS 5.0 problem:
> --------------------
>
>
> /BootAll is fully compatible with DOS 2.0 - 5.0. However, during the
> upgrade, the DOS 5.0 setup.exe program will overwrite the boot code stored
> in the master boot record (the first sector on the disk). This is also
> where SpeedStor stores the /BootAll information. So, by replacing the
> master boot record, setup.exe has effectively turned off /BootAll.
>
> Disabling the /BootAll switch causes the geometry of the DOS partitions to
> revert to the geometry in the CMOS setup area. If this geometry does not
> match the drive's real geometry exactly, DOS will not be able to read from
> the boot disk; the most likely result is "Missing Operating System".
>
>

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```
> Solution:
> ----------
>
>
> Storage Dimension has developed a utility (MbFix.exe) to replace old
> master boot record from the uninstall disk.
>
> To solve this problem, User should run mbfix.exe (master boot fix) after
> the DOS 5 upgrade.
>
> First, boot up under any DOS version - since you just installed DOS 5.0,
> the easiest thing to do would probably be to boot up using the uninstall
> diskette, but DO NOT allow uninstall to proceed: running uninstall will
> most likely destroy all data in your boot partition.
>
> Now run mbfix.exe - it assumes that the uninstall diskette is in drive A:,
> but if it isn't (or if you're simply curious), use "mbfix /?" to obtain
> simple help instructions.  This program will inspect the old master boot
> record saved by DOS 5.0 and if /BootAll was used, mbfix.exe will restore it
> after saving a copy of the current master boot record.
>
> If /BootAll was not enabled in the old master boot record, mbfix.exe will
> not try to restore it - restoring master boot would not fix anything.
>
>
> An alternate solution:
> ----------------------
>
>
> If mbfix.exe is unavailable, there is another way to restore the master
> boot record: boot up under DOS 5.0, run SpeedStor using exactly the same
> options used initially, then delete and recreate the DOS boot partition.
>
> Attention to detail is important in the last step.  The partition
> boundaries (starting and ending cylinder) *must* be the same as the
> original values when you recreate it.  And, you must NOT format the
> partition after recreating it - formatting destroys existing data.  This
> will write both a new master boot record and a new partition boot record.
>
>
> Why is mbfix.exe better?  It restores only the master boot block.  It only
> restores master boot if the fix is required.  It saves the current master
> boot record so you can restore that if other problems (unknown at present)
> are encountered.  It does not require that the user recall *exactly* all of
> the command line option switches used with SpeedStor initially.  Finally,
> it usually requires no user input; with the alternate method it's possible
> to miss-key the boundaries and destroy data.  Additionally, it will not
> restore a master boot record saved from a different system (perhaps
> leftover from a upgrading another system nearby).
>
>
> Recommendation
>
> There is a small risk that system mmay not boot after the old master boot
> is replaced but there is no better way to solve the problem without changes
> to DOS setup program. I suggest that we make MbFix.exe utility available
> to PSS to distribute.
>
```

From mikedr Thu Jun 20 17:31:51 1991
To: adriank bradc bradsi ericst naveenj tomle
Subject: Re: Serious dos 5 issues from PSS.
Date: Sun Jun 23 15:54:48 PDT 1991

Date: Thu Jun 20 17:30:46 1991

|>From naveenj Thu Jun 20 16:48:43 1991
|To: adriank bradc bradsi ericst mikedr tomle
|Subject: Serious dos 5 issues from PSS.
|Date: Thu Jun 20 16:47:31 1991
|
|
|Here are a few problems that PSS have come across fairly frequently. These
|problems are still unresolved and PSS is looking for help in resolving
|them succesfully.
|
|--
|
|Problem #1: autoCad and extended memory:
|
|The /int15:xxxx switch doesn't work with the DOS release 10 versions of
|AutoCAD because of a bug in HIMEM.SYS. AutoCAD sees a vdisk header
|with HIMEM.SYS but not one it understands so AutoCAD will disable all
|extended memory support because it doesn't want to trash any data.
|
|AutoCad may be able to get a TSR to "patch" the memory image of HIMEM.SYS
|to use correct headers. AutoCAD386 is not affected by this problem.
|
|

This should be patchable. It doesn't really need to be a TSR, just
a transient program that modifies the VDisk signature into a format
that AutoCad expects. If they can tell us what they are looking for,
we can create such a program, and make it available via PSS.

|Problem #2: Emm386 hanging machine on boot.
|
|This is a problem that has come up fairly freqeuntly, on a number of
|systems. In some situations it is a case of a conflict in the upper memory
|area, in some situations it is a case of himem using the incorrect a20
|handler. But often enough PSS has eliminated all of these causes as
|possiblities and still had emm386 hanging the machine.
|
|This one is unusall because the customer reporting it was a dos 5 beta site
|and the emm386 that came with his previous beta version did not hang his
|machine. This case is just one among many (this problem with EMM386 is
|probably the most important at this time).
|
|I have detailed Problem Description/Attempted description for developemt
|folks to look at.

EMM386 is actually our point of greatest exposure to hardware
incompatibilities. I'm not surprised people are having trouble with
it. The typical diagnostic technique PSS should recommend is loading
EMM386 with the entire memory region excluded; this is of course not
a usable configuration, but this will help distinguish between problems
related to mapping over important memory regions, as opposed fundamental
incompatibilities in EMM386. Unfortunately, I don't think we can
easily address these problems any way other than a case by case
examination of the actual configurations here by the developers.

|
|
|Problem #3:
|
|This has occured twice today, to two different customers. In the middle of
|thier install the get the message: "Fail detection level 1, warning

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|command.com has been changed. Possible causes: Ner version, corrupted file,
|virus. Do you want to continue with the installation(Y/N)". In both cases,
|upon selecting no, setup proceeded to ask if the user wished to delete
|command.com, io.sys and msdos.sys.
|
|In each case the uninstall was sucessfull.
|

I've got no idea on this one, I'll see what John has to say.

|Problem #4:
|
|In three cases, maybe four, simply having an Adaptec controller irregardless
|of the rest of the configuration and using EMM386.EXE will hang the machine.
|If the user pulls out that particular controller, the problem goes away.

These may be configurations requiring double buffering. If the users
have the Adaptec device drivers that do double buffering, they should
load them; otherwise they should load Smartdrive as a diagnostic check.

|
|Problem #5:
|
|After a successful install, User sees only part of there hard drives, are
|missing a few partitions or seeing less than their full hard drive size in
|fdisk. This is due to haveing more than 1024 cylinders sometimes, but PSS
|has seen this happen in other cases too. Sometimes the FAT is scrambled after
|installation or the partition table also.,
|

We need to get more information on these problems. There are probably
several different things going on. People who use disks > 1024
cylinders shouldn't lose support for those cylinders as long as they
have a DOS 5.0 compatible version of the device driver they used to
access the extra space before. PSS should verify the user's device
driver supports DOS 4/5 and loads correctly under the new configuration.

Losing sight of preexisting partitions implies there are some custom
partition types that we aren't converting correctly. We need to know
the specifics of the configuration, and how the user had set up the
system with the old version of DOS.

I don't have any specific ideas on FAT scrambling, other than the possibility
that the user's system was screwed up before, and running the upgrade made
it worse.

|
|Problem #6:
|
|We frequently see the Dosshell hang or the task swapper hang or various
|features of the shell don't work in multiple configurations.
|

Where the shell hangs on startup, PSS should check for the misidentified
monochrome problem we know about, by checking which VID and INI files
were installed. Where this isn't the case, another useful diagnostic
technique is to rename the DOSSHELL.VID file, and try to load the
shell with no driver. It should come up in text mode.

Swapper hangs could be any number of things, including application
compatibility problems. One thing for PSS to check is that there is
enough space on the swap disk for the swap files. How much space
is required is highly variable, depending on the screen mode, the number
of apps swapped, and the size of the apps swapped.

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