

532
From peterhey Tue Dec 17 16:43:09 1991
To: bradsi
Subject:
Date: Tue, 17 Dec 91 17:41:19 PST

this is the letter referred to in my other mail requesting
OK of advance release of Win 3.1 launch date to OEMs.

>From peterhey Tue Dec 17 15:05:45 1991
To: alexn billmi jonro josephk oemman richt
Cc: jonl peterhey wddirect
Subject: 1st Win 3.1 Launch Letter to OEMs
Date: Tue, 17 Dec 91 16:03:20 PST

Below is the letter created for mailing to our OEM Windows
licensees—the first in a series to build support for the
Win 3.1 launch. Thank you for submitting your comments
asap. We aim to drop later this week.

\024December 18, 1991

Dear Windows Hardware Vendor,

Windows 3.1 will be launched at Windows World on April 6.
Microsoft is pouring unprecedented resources into the Windows
3.1 launch to make it an unqualified success. The main
focus of this letter is to help you leverage Microsoft's
enormous investment.

FACT: We will be investing more promotional,
marketing, and support dollars in the Win 3.1
launch than any other product launch in Microsoft
history.

In many respects, Windows World 1992 will be the 3.1 Launch
Event. This Windows release will be the most comprehensive
and best supported ever. We believe all the conditions are
right for a massive shift to Windows. A complete foundation
of Windows Applications is in place, 70% of all PCs sold are
Windows capable, and Windows 3.1 is the right product.

FACT: The Windows 3.1 beta program is the largest and
most exhaustive ever in the PC industry.

Feedback from our 15,000 beta testers has been
overwhelmingly positive. The product's improved fit and
finish, substantial ease of use, reliability, and
performance improvements deliver on the Windows promise to
make using PCs easier for everyone.

FACT: In developing Windows 3.1, over 1,100
modifications were made to Windows 3.0. These
changes were focused in four general areas:
improved usability, greater reliability, enhanced
applications support and new technologies (such as
Windows for Pen Computing).

Windows 3.1 represents a dramatic evolution to an already
highly successful product. We are committed to working
closely with you to make the Windows 3.1 launch a very
successful launch for you as well as Microsoft.
Specifically, we would like to work with you on the
following:

- o Windows 3.1 Compatibility
o Windows Logo Program
o Pre-launch Technical Training
o Windows World Participation
o Windows Upgrade Program
o Windows hardware design optimization

Below you will find descriptions of our activities in these
areas and how you can benefit by participating. Details on
how to reach us via the 3.1 Launch Hotline will be in our
next letter to you. In the interim, your Microsoft Account
Representative, or his/her designee, will be contacting you

EXH 77 DATE 5/31/02
WITNESS Barrett
MARY W. MILLER

soon to help answer any questions you have as well as learn more about your plans for this important event.

Sincerely,

OEM Launch Communications

Windows 3.1 Launch Programs

Windows 3.1 Compatibility

We strongly encourage you to test all of your PC lines for Windows compatibility. Clearly communicating compatibility in marketing communications and collaterals will enhance the appeal of your systems to purchasers of Windows applications. Microsoft developed the Hardware Compatibility Test (HCT) to measure and certify a PC's ability to compatibly run Windows. With only minimal manual intervention, an OEM can execute the HCT on all models suitable to run Windows and submit the results (which are automatically compiled onto a floppy) to Microsoft for analysis.

FACT: In the first nine months of 1991, sales of Windows applications by the top vendors totalled \$711 million, an increase of 85% over the full-year 1990 sales total of \$385 million.

If the results indicate compatibility, we will provide to you the new Microsoft Windows Logo to use freely in your marketing and manufacturing efforts.

FACT: The name of each PC model that successfully passes the test will be entered on the Hardware Compatibility List (HCL) distributed with each copy of Windows 3.1.

The HCT is part of the beta OAK and ODK products. It can also be obtained by contacting your Microsoft Account Representative. A application to license the Windows Logo will be sent automatically to all OEMs submitting successful HCT results.

Windows Logo Program

Microsoft has created a new logo for Windows to provide useful information to customers shopping for Windows hardware like your own. Customers will look for the logo as a statement that the product on which it appears supports or in some way explicitly contributes to the Microsoft Windows Operating System.

FACT: Sales of Windows applications in 1991 will approximate \$1 billion.

This logo was prominently displayed at Fall COMDEX '91 and will be an integral part of the packaging for Windows beginning with the 3.1 release. A black-and-white rendition is pictured below:

[graphic of logo inserted here]

We strongly encourage you to license use of this new logo (at no charge) and include it on your product packaging and in your promotional materials.

FACT: Microsoft is encouraging independent software vendors to assimilate the new Windows logo into their packaging and promotional materials.

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Given the importance of compatibility between personal computers and the new 3.1 Windows release, we are requesting all hardware system vendors to complete the HCT before receiving rights to use the logo.

Pre-Launch Technical Training

As vendors of Windows products, we know that the 3.1 upgrade will trigger calls to your support lines as well as Microsoft's. We want to help you prepare for these calls. Accordingly, we are planning Windows 3.1 Product Support Training Seminars to be held around the U.S. in the month before the launch.

Please note that because of capacity constraints attendance at these seminars will be restricted to Product Support professionals only. Pre-registration will be requested to guarantee a spot. Cities, dates and times are still being determined and will be communicated to you in our next mailing.

Windows World Participation

As the largest Windows-focused tradeshow in the country, Windows World is a major marketing opportunity for any vendor of Windows-related products.

FACT: This year Interface expects between 60,000 and 65,000 attendees to the combined Windows World and Spring COMDEX shows in Chicago.

FACT: Over 55% of last year's attendees were Corporate End Users and Buyers.

Enclosed you should find an exhibitor brochure for the 1992 edition of the Windows World Show. Interface expects around 1,000 exhibitors to sign up for the combined Windows World and COMDEX shows, making Chicago the second largest computer industry gathering in the U.S.

FACT: By this past November, exhibitor registrations for Windows World '92 had already passed the total number of exhibitors that appeared at Windows World '91.

Our plans to launch Windows 3.1 at the show only add to an already exciting event. We expect Windows World to be a forum for the launch of a number of other important hardware and software products from a range of vendors. Don't miss the chance to be there and demonstrate the strengths of your Windows PCs. Contact The Interface Group at (617) 449-6600 Ext 4023 to sign up as an exhibitor.

Windows 3.1 Upgrade Offer

We strongly encourage you to address your users' upgrade needs. We expect most Windows 3.0 users will upgrade to Windows 3.1 because it offers dramatic improvements over 3.0 in a number of areas, including performance, reliability, and usability. Upgrading end-users represents a substantial revenue opportunity for OEMs, particularly those that have bundled Windows in the past and thereby possess a large end-user registration database.

As a service to OEMs who wish to make the Windows 3.1 upgrade available to customers without assuming responsibility for fulfillment, we would like to provide you, at our expense, upgrade coupons that Microsoft will fulfill directly through the mail. These coupons will be Business Reply Cards that should fit in most mailings and provide your customers the convenience of ordering the new release through the mail. Coupons will be delivered to OEMs requesting them by March 15. You can request these coupons through our Launch Hotline, or through your Microsoft Account Representative.

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Windows Hardware Engineering Conference

On March 1-3 at the San Francisco Marriot, Microsoft will host a conference and mini-exhibition aimed at helping your best engineers build better Windows PCs.

Why focus on building Windows PCs?

FACT: The Windows software standard virtualizes the hardware interface for application vendors, thereby liberating PC vendors from the need to conform to a rigid hardware standard—providing room for greater differentiation and profitability.

The Windows Hardware Engineering Conference (WinHEC) will bring OEMs together with Microsoft's Windows device driver engineers and a wide range of independent hardware vendors active in display, audio, networking, storage, processor and other technologies. The object: three days of technical discussions reviewing the widening range of creative alternatives for PC engineering.

WinHEC's general sessions will consider current and upcoming evolutions in the Windows device driver interfaces (including updates on Windows NT and multimedia), flesh out the new technical directions disclosed at the OEM briefing and provide detailed insights into the function of the Windows execution performance tests now being developed by leading industry analysts. Participants in the session on upcoming Windows products will be required to sign non-disclosure agreements prior to entry.

WinHEC is being timed to allow you to begin to formulate Windows product plans prior to WinWorld so that you can address customer needs and top-of-mind concerns at that forum.

For more information on the Windows Hardware Engineering Conference, contact your Microsoft Account Representative. After January 5, you may call directly for an invitation and conference brochure (7:30a.m. - 5:30p.m. PST, Mon. - Fri.):

800-437-0716	in US/Canada.
206-325-1893	other International
206-325-2200	FAX

Summary

Windows is becoming huge—bigger than we ever anticipated. We strongly encourage you to leverage Microsoft's revised and expanding investment plans by:

- o Executing the HCT on all appropriate PCs and returning results to Microsoft for analysis
- o Licensing and leveraging the new Windows logo.
- o Preparing for the Windows 3.1 launch by attending pre-launch training and contracting for a booth at Windows World
- o Aggressively exploiting Windows 3.1 upgrade opportunities
- o Attending the Windows Hardware Engineering Conference in San Francisco on March 1-3, 1992 to obtain ideas for new, creative hardware designs.

Catch the wave.

You'll be hearing from us again in January. Until then, have a happy holiday.

533
From adamt Tue Dec 17 16:43:31 1991

To: richt timbre

Cc: adamt bradsi chriswo davesm deniser gerardz gregg leighj marcc marked

Subject: PSS Text Issue

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Standard Mode: Bad Fault in MS-DOS Extender.
ault: 000D Stack Dump: 0000 0000 0070
raw fault frame: EC=0000 IP=5D1D CS=0397 FL=3006 SP=000A SS=02F7

if I installed HIMEM.SYS instead of 386MAX CS=037F was the only change
this always happend after windows copied WIN386.PS2
I tries this about 12 times
I had NO autoexec.bat my config only had what STACKER needed

dsk#	#fil	SIZE	Build 61b
1	39	1,195,812	
2	46	1,202,566	
3	129	1,182,728	
4	72	1,195,448	
5	43	1,204,718	
6	68	1,173,026	
7	80	1,192,092	

223
From andyhi Mon Dec 16 09:30:31 1991
To: Kalak winbeta
Cc: bradsi
Subject: HOT: please sign up
Date: Mon Dec 16 09:27:33 PDT 1991

Please sign up and see if we can get on the first wave of final beta shipments.

Thanks
Andy
>From bradsi Mon Dec 16 08:28:38 1991
To: andyhi
Subject: please sign up
Date: Mon, 16 Dec 91 08:27:59 PST

Ken Ashbaugh
Network Systems and Services
29 South Peachtree Street
Suite E
Norcross, Georgia 30071
(404) 449-9376 FAX (404) 449-7025

as a beta tester. he's running a panel at winworld on "msdos apps under win 3.0". i've been telling him how much better win 3.1 is than win3, and I'm trying to get him to change the focus of the panel to more win3.1. but he said he was previously closed out of the beta. thanks.

224
From davidcol Mon Dec 16 09:44:29 1991
To: davidw dennisad timmcc winwar
Subject: Re: bug 8847
Cc: rickem
Date: Mon Dec 16 09:43:11 1991

Sorry for the back seat driving here dennis, but has this been thought through very well. For example, I assume there's some hack in the font mapper to map courier new 8pt on EGA to Courier 8pt bitmap. What happens if it's not there?

What about other testing implications? What's gonna break without that 8pt font that's been there since June and been through all our testing?

Let's get together and chat about this stuff, I haven't seen any email that makes me feel good about the thought we've put into this one way or the other.

225
From georgen Mon Dec 16 09:45:13 1991
To: bradsi

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This sounds familiar doesn't it? If you think we already now about this, I won't follow up.

15-Dec-91 16:21:05
Sb: Build 61b problems
Em: Mark Aronson 71167,2470
To: Andy Thomas (W3.1 Sysop) 73650,50

I upgrading from build 58 (that worked great) to build 61b I would always get:
'Win Setup caused a general Protection fault in module setup.exe at 0015:096b'
then windows would force me to close at the DOS prompt I saw

Standard Mode: Bad Fault in MS-DOS Extender.
Fault: 000D Stack Dump: 0000 0000 0070
Raw fault frame: EC=0000 IP=5D1D CS=0397 FI=3006 SP=000A SS=02F7

if I installed HIMEM.SYS instead of 386MAX CS=037F was the only change this always happend after windows copied WIN386.PS2
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I had NO autoexec.bat my config only had what STACKER needed

dsk#	#fil	SIZE	Build 61b
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4	72	1,195,448	
5	43	1,204,718	
6	68	1,173,026	
7	80	1,192,092	

228
From andyhl Mon Dec 16 09:47:43 1991
To: bradsi davidcol
Cc: a-andyt a-stevef
Subject: winbtb update
Date: Mon Dec 16 09:45:28 PDT 1991

CIS has found and fixed the problem.

They will also be able to credit the accounts of people that got charged. They think they'll be able to have this done by mid-week.

I'm still working on a solution so people can use CIM and TAPCIS to automate the download process.

Andy

229
From bradc Mon Dec 16 09:48:04 1991
To: lizsi martyta w-carrin w-clairl w-pamed
Cc: bradc bradsi
Subject: MS-DOS 5 On-going PR plan
Date: Mon Dec 16 09:48:01 PDT 1991

I just read this thank you for getting it to me - lots of good ideas but we are not there yet. I have the following comments:

Situation Analysis

In the DR DOS section i think you are close but do not have the right spin. The editorial community perceives DR DOS 6 as having lots of momentum and as the underdog and they go out of their way to give dr the benefit of the doubt. this happens with even the best mags like pc mag. for example, pc mag two weeks ago mentioned in the comment part of their best seller list that dr was moving up -even though they had not even reached the top 15. this month they mention again that dr is number 14 when one might argue that the more interesting item with at ProComm Plus moved up to #3! the implications is that we need to target the dr lovers as much as the ms-dos 5 lovers as you suggest later on

you also need to point out that most of the press incorrectly perceives dr dos to be technically superior

note that though inertia is slowing down Upgrade sales it is still one of the top 5 best sellers in the industry and has been one or two

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almost every month since ship

Key Messages

I would phrase these differently

- 1) MS-DOS is the standard - Only MS-DOS is DOS
- 2) MS-DOS defines the compatibility standard - we care alot about compatibility and are religous about it b/c our users are
- 3) MS-DOS 5 is technically superior
- 4) We are driving the MS-DOS standard forward - portable computing initiative and later ms-dos 6

another message is that dr dos 6 is incompatible and buggy. as i said in an earlier mail i bet it ranks with 123 for windows and probably pc tools as the buggiest products to be released this year.

Objectives

Please do not say we are spreading DR DOS FUD. that implies that the data we provide people who ask, like the press is untrue - it isn't. the top two pr objectives are to 1) Ensure the press gets the true story on our superiority and dr's inferiority - we have the better product; 2) derail the dr dos train - as discussed in the situation analysis the press is generally very kind to dr and the press is helping to create momentum for the product even though it is lousy.

communicating our momentum is a good objective as is communicating our technical leadership and how we are moving the standard forward aggressively.

Tactics

use third parties

i like the idea alot but i'm not sure about implementation. building ms-dos 5 user/company profiles is good. who are those third parties you want to solicit? i need more details.

ibm could still go with dr so i want to hold the oem release for now. it is much more powerful if ibm announces anything with dr. it might be interesting to consider a release that indicates that the top x oems (100, 200?) are now shipping ms-dos 5 with their systems, but if our only coverage is page 108 of pc week (like the last release) then there is not enough value in releasing now.

influence coverage

aggressively following reviews is great, but is not enough - i have learned this mistake and will not make it again. we need to proactively provide information to key people in the press as an ongoing part of our business.

we need to track the people positive towards dr just as much as those who are negative. we have a legitimate goal to provide these people our side of the story.

the backgrounder on what people should look for when evaluating an os is a good idea but don't you think it is too late for ms-dos/dr dos. who will read it now? you need one for windows

dr dos comparison doc if you mean feature comparison, NO! this misses the point. we do not want to get into a feature war or legitimize dr's efforts to say the two products are equal with dr having more features. we need to take a step above and win the battle on compatibility, technical superiority and our vision.

ms-dos resource kit is done. see randym

share data with folks that shows we are better - good

editor buddy program - excellent how do educate the "buddies" on ms-dos?

leverage upcoming news - much more than ms-dos 5 rom or apm; as i have discussed this is the portable computing iniative - a commitment, a position of leadership.

ms-dos terminology reminder - how will we implement so that we don't just legitimize dr? ya know when people say pc-compatible they

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really mean ms-dos compatible

i'll let bradsi make the call on using gordon letwin more. i'm not sure.

leverage ms-dos marketing

i like on-going direct mail/postcards etc.
ms-dos tech workshops are done for now.
we need to discuss the upcoming marketing efforts and see where pr can help.
whatever happen to the local columnists list?

we should sit down and discuss - pls set-up. i'm sure that you will have additional ideas with my revised objectives. what is the status of getting more resources on ms-dos?

230
From stephl Mon Dec 16 09:48:35 1991
To: bradsi
Cc: nataliey
Subject: Yogen Dalal
Date: Mon, Dec 16, 1991 9:46 AM

Yogen will be checking into the Woodmark Hotel (in Kirkland) this evening. You can meet him there or leave him a message and he will come to you.
Thanks,
stephanie

231
From greglo Mon Dec 16 09:53:41 1991
To: bradsi davidcol tonle
Cc: mackm
Subject: Re: Novell
Date: Mon, 16 Dec 91 09:52:50 PST

1. the purpose is to map Fail into a reasonable error code that will be correctly handled by windows apps
2. it would ship only with Win31 retail; no one could distribute separately (although we'll probably make it available earlier to a few key accounts such as American Airlines)
3. testing will be done by our test group as well as Novell and a few corporate accounts such as American Airlines.
4. maintenance could potentially be done by our group (AaronR; he could do the initial work except that he is booked solid).
I don't know if MSDOS6 will make such changes as to require major changes (like lots of new functions) which could require some help from your group.

>From tonle Sat Dec 14 10:58:32 1991
To: bradsi davidcol greglo
Cc: mackm
Subject: Re: Novell
Date: Sat, 14 Dec 91 10:58:03 PST

I am still confused about the solution. How do we use this library. How will this be used to circumvent Novell's panic on a return from retry, fail. Who uses the library. Is this something your sending in the SDK for use with WIndows apps? Once we get past understanding how this solution works then I need to know who is going to test this library and who will support it in the future? Do I have to update it every time I rev the Dos?

I am not against helping out here, this is a serious problem, I just want to understand what I am getting myself into.

Ton

Here is a summary:

This measure is to address the critical-error problem that American Airlines is up in arms about. Today, users think they've hung their machines when a server goes down. Novell wants us to crash individual apps instead, but we can do better.

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It would take about 3-4 days for one of the MS-DOS developers to take the code out of the MS-DOS Kernel and build it into an independent library routine. We could turn that into an installable driver which would allow apps to continue after encountering such an error.

We would then ship this driver with Win31: we need not give this code to Novell/DR nor give them permission to redistribute it.

FYI: Here are the gory technical details of the problem:

A typical scenario would be where WinWord is saving a file out to a NetWare server when the server goes down or the net cable gets pulled, etc. You get a Window critical-error dialog giving you the choices of Retry or Fail. Retry will always just give the same error again, so you can't escape that way. Fail will also bring up the same error, but if you keep hitting it again and again long enough, eventually you should get back to the application and be able to save your work. Most of the time, however, the user will give up and reboot before then. Also, end users won't have any way of knowing which seemingly endless chain will end and which will not.

The problem is a result of two "design deficiencies", one for Novell and one for Windows. What NetWare is trying to do is have MS-DOS abort the application: bango, no chance to save your work. That is what they do for non-Windows apps. Windows won't let them, because Kernel can't survive having MS-DOS terminate an app behind its back.

NetWare generates an int24 (critical-error) with Retry and Abort being the only available choices: it never expects that to return. Windows won't allow Abort, we offer the user Retry and Fail. When the user chooses Fail we return to NetWare. They say "Whoa! Someone actually returned, this is not kosher!" but they try to handle it as best they can without, you know, really getting involved. They return an error code of -1 to the original calling application. That sounds reasonable, but it turns out that, since -1 is not a valid error return from most MS-DOS functions, apps aren't checking for it or handling it reasonably. For apps like WinWord, they will just go on writing out more and more file, generating more and more errors which they ignore. It can go on a long time.

Novell's idea of the correct solution is for us to modify Kernel so that they can Abort a Windows app. This would take two weeks of design and coding before it could be testable, followed by goodness knows how much debugging and fixing. These are potentially very destabilizing changes. It is far too late to make these changes now.

Our idea of the correct solution is for NetWare to handle these critical errors the same way MS-DOS does: when the user chooses the Fail option, MS-DOS figures out a reasonable error code to return to the app, based upon the actual internal error and the MS-DOS function being called by the application. This is very complicated mapping, involving eight tables and lots of code in the MS-DOS kernel. It would take Novell about three months to reverse engineer this and implement it themselves.

But again, it would only take about 3-4 days for one of the MS-DOS developers to take the code out of the MS-DOS Kernel and build it into an independent library routine. We could turn that into an installable driver and ship it with Win31. We need not give this code to Novell/DR nor give them permission to redistribute it.

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From bradc Mon Dec 16 10:07:48 1991

To: bradsi

Subject: FW: Stacker Update

Date: Mon Dec 16 10:08:06 PDT 1991

any comments?

>From bradc Thu Dec 12 17:57:30 1991

To: bradsi mackm richf

Cc: bradc

Subject: Stacker Update

Date: Thu Dec 12 17:57:47 PDT 1991

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Subject: EMAIL auto_notify

Re: RE: FW: Windows 3.10.060 Problems & Updates
Received OK on Mon Dec 16 11:43

User Message follows

Thank you for submitting your bug report to the Windows Beta Program.

Because of the large number of beta sites, and the complexity of the program itself, we will be unable to respond to each of your reports, though we review each one, and will be contacting you in the event that we need more information to narrow down the bug for our development staff.

If you experience critical problems, such as difficulty reading or writing to your hard drive, please notify us as soon as possible, so that we may respond immediately.

In your reports, please make sure to use the Systems EFORM template called "Windows 3.1 Bug Report" and include a copy of your AUTOEXEC.BAT, CONFIG.SYS, SYSTEM.INI, AND WIN.INI (when necessary) files, in addition to the steps that must be followed to reproduce the problem.

Your participation in the Beta program is important to us, and we appreciate your efforts in helping us make Windows 3.1 an excellent product.

271
From lauraeu Mon Dec 16 11:48:02 1991
To: bradsi jonl sallyn
Subject: MSJ Jan Ed note
Cc: ericm joannes
Date: Mon Dec 16 14:47;21 1991

Please read and OK ASAP. It needs to go out tonight. Thanks.

Windows is stronger than ever. Near the end of 1991, the installed base of Windows had grown to 7.9 million copies. Windows is now the world's most popular graphical computer environment, with about half (46 percent) of those users outside the United States. The forecast for 1992 is even brighter; sales of 9.2 million copies are predicted. Preinstalled or bundled copies of Windows are now standard with many brands of PCs, including AST, Dell, Everex, Grid and Zenith.

Windows not only sells extremely well, it gets high marks from purchasers. In a survey conducted by Field Research Corporation, randomly selected users gave Windows an average rating of 7.6 on a scale from 1 to 10. The survey also found that users like Windows better the longer they work with it.

Users aren't skimping on the hardware they use with Windows. 70 percent are running on at least a 386SX, and 80 percent work with a display of VGA resolution or better. More than three quarters of the users ran Windows on machines equipped with between 2MB and 4MB of RAM.

Microsoft is going to great lengths to ensure that Windows version 3.1 will enhance Windows acceptance still further. A beta test program with over 15,000 sites is underway to guarantee that 3.1 is very compatible with 3.0 while delivering significant new benefits.

The most important improvement of 3.1 is speed: faster printing, faster application startup, faster screen updates, faster disk I/O, and a faster MS-DOS box. Comparing Windows 3.1 beta 1.55 and OS/2 2.0 beta 6.167, testers at Microsoft found that Windows applications load twice as fast under 3.1 than do PM apps load under OS/2 2.0. Perhaps more importantly, they determined that Windows applications running native under Windows 3.1 loaded 30 to 50 percent faster and painted their displays 20 to 60 percent faster than they did running in OS/2 2.0's "Windows box." So much for cockamamie slogans like Ra better Windows than Windows.S

The retail release of Windows 3.1 is being augmented in a number of ways. It will support the Multimedia Windows API, and include MIDI and waveform drivers as well as several sound applets. The TrueType APIs will be improved to support font rotation. Drivers for printing high quality Truetype documents, along with a supplementary font library, will be bundled with the retail product.

Robustness is also improved with 3.1. Systems developers in Redmond have declared war on UAEs caused by Windows and by misbehaving applications as well. A strongly typed WINDOWS.H, parameter validation for every function call to Windows, and improved error reporting all help in exorcising these demons from your code.

As developers ready their applications for Windows 3.1, their most important

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job is to test for compatibility. The next issue of MSJ will include a comprehensive checklist for ensuring that your application will run better than ever under Windows 3.1.

272
From tomhe Mon Dec 16 11:50:37 1991
To: bobt theresas
Cc: bradsi drg tomhe
Subject: Windows User Survey
Date: Mon Dec 16 11:47:26 pdt 1991

BradSi mentioned something about the Windows User Survey info we have possibly being available for distribution (maybe in summary form?), so Symantec is now excited and wants it ASAP. They also want the customer support tools SteveB mentioned in his speech (not sure what this is exactly).

Any help would be appreciated.

273
From andyhi Mon Dec 16 11:57:20 1991
To: marcw winwar
Cc: a-richh korys vlads
Subject: RE: Upgrading OEM display drivers bug
Date: Mon Dec 16 11:54:58 PDT 1991

I think that this is going to generate a lot of calls to the tech team. A good number of internal and external users have OEM displays.

But I haven't heard many complaints yet, is this a fairly new bug?

What happens if we upgrade over a prev. version of 3.1?

From marcw Mon Dec 16 11:15:38 1991
To: winwar
Cc: a-richh korys vlads
Subject: Upgrading OEM display drivers bug
Date: Mon, 16 Dec 91 11:08:49 PST

After upgrading an OEM display that uses the 3.0 internal VGA VDD (most OEM VGA displays do), the user will get an error whenever they try to run and non-windows application, telling them to run Setup again.

The problem is that whenever we upgrade an OEM device over 3.0 Windows, we do not do the correct translation. For displays, we do not change the WIN386 VDD from *VDDVGA to VDDVGA30.386. The change is very straightforward:
if we are upgrading an OEM device, we always put the file installation through our existing translation code.

Work around: specify OTHER for display and use the OEM setup disks to specifically install the display.

I am sitting on the fence on this one. The change will ONLY AFFECT OEM DEVICE UPGRADES. Other upgrades or new installs are not affected, so this seems pretty safe. However, there is a simple work around and this change has not been thoroughly tested on all the various OEM device drivers (it affects not just OEM displays, but all OEM devices).

274
From jeffpar Mon Dec 16 12:04:12 1991
To: bens mikem raype
Cc: bradsi mackm tomle
Subject: Re: cougar command.com
Date: Mon Dec 16 12:03:41 1991

Negative, it is not true.

>From raype Mon Dec 16 09:05:03 1991
>To: bens jeffpar mikem
>Cc: bradsi mackm tomle
>Subject: Re: cougar command.com

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installation, I restarted windows. i no longer have net access from the file manager, no net menus under Disk. apparently my winnet driver is no longer loader. it was fine in build 61b. I exited windows and rebooted the machine. same problem -- no net access from file manager.

running maintenance mode install shows that it detected my net correctly : lan man 2.1 basic.

285
From natharm Mon Dec 16 12:51:50 1991
To: billg bobmu bradsi camerom carls darrylr davec davidcool davidw
dennisad edwardj gaben jimall jonl karenh mikemur paulma paulo philba
raleighr rashid robg steveh tonyw w-pamed
Subject: Winstone suggestions
Date: Tue Dec 17 12:50:30 PDT 1991

JonL had a meeting a month or so ago on the "new world" we face with OEMs. One idea which came out of that meeting is the idea of having a benchmark suite which we called "Winstones". There hasn't been a lot of general discussion since then, so I thought I would send some ideas on the topic, both to people in the original meeting and to others that may be effected.

I think that Winstones are an INCREDIBLY important marketing move for us, which can benefit just about every aspect of our systems strategy.

The basic idea is simple:

- Create a benchmark suite analagous to SPECmarks, but specialized to Windows based systems (both Win 32 and Win 16, and on x86 and MIPS).
- The suite will include measurements of a set of different activities - screen graphics, printing, text, disk I/O, CPU etc.
- We would create the suite, get it out to magazines and others, and generally publicize the hell out of it.

The general motivation to do this is to provide a focal point for activity to improve the hardware that Windows runs on (accelerator boards, , and at the same time give a firm quantitative basis for many of our present challenges - improving value for our customers, selling Windows vs OS/2, selling Windows NT, promoting Jumbo, promoting TrueType, showing the value of Win32, showing the value of scalability, demonstrating the value of MIPS... There are a LOT of potential benefits.

Note that this is a MARKETING activity. There are a number of technical aspects, but this is first and foremost a technical marketing activity.

The Winstone suite would contain a number of different test suites. This is not a small joke benchmark like Dhrystone - it is more like SPEC, but probably even bigger.

There are several requirements placed on Winstones by marketing factors:

- There must be between 5 and 15 different tests. This way you can make a nice graph of system performance.
- We want to have one focussed test in each area that is going to be important for somebody to improve. As an example, if we want to encourage graphics accelerators, then there must be a separate graphics test.
- There should be an overall number - the "WINmark" which is a harmonic or geometric average of the separate tests. We should also define the particular subsets - "Graphics WINmark", "I/O WINmark" etc.
- We must be able to give the source code of the test away. This is probably not "public domain" in a strict sense (see below) but close to it.
- We want some of the tests to measure the entire machine configuration specific. As an example, some tests will run faster if you have more RAM, so that you can do more cacheing. Although that may not seem fair, it actually is JUST what we want. This is discussed more below.
- The tests must be able to run automatically and then return an answer without human intervention.

There would be two categories - system level benchmarks and application level benchmarks. The system benchmarks would primarily exercise Windows and the underlying hardware. The application benchmarks would measure what kind of

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performance people could expect in their apps. Note that SPECmarks are purely an application benchmark in this terminology.

The system benchmarks would be created largely by using the "artificial app" technology that has been in use in the NT group. Basically this lets you run a real app, trap all of its calls and arguments, and then be able to replay them in a script. This is a terrific way to get "real" tests easily. We can append the scripts from several different runs of an app or different apps to make a single test for each sub category.

Here is a sample list of the system benchmarks:

- Screen graphics & Text
 - Fonts and rich text
 - General GUI
 - Presentation
 - Draw programs
 - Paint programs
 - CAD programs
- Printing
 - Rich Text
 - Graphics
 - Bitmaps
- Disk I/O
 - General file read/write
 - Database access
 - Multitasking disk access
- Virtual memory
 - Memory allocation/freeing
 - Large memory access
- Multitasking
 - Running many of these tests in parallel
 - Background communications at 9600 baud
- Multiprocessor/thread test
 - CPU bound process with threads suitable for MP
 - CPU and I/O " " " " " " " "
- Messaging
 - Windows message passing
 - OLE performance???
- Multimedia
 - CD ROM input speed ?
 - Animation test?
 - Sound card performance?

In most cases the "artificial app" will give us a very good benchmark pretty easily. To give an example in more detail, here is one way to break down screen graphics and text.

- Screen graphics & Text
 - Rich text & fonts - combined script from:
 - Word for Windows
 - WordPerfect for Windows
 - Aldus Pagemaker
 - General GUI - combined script of dialog/menus from many Window apps
 - Draw programs - combined script from
 - Corel Draw
 - Micrografix
 - Aldus Freehand
 - Presentation - combined script from
 - PowerPoint
 - Persuasion
 - Freelance
 - CAD programs - combined script from
 - AutoCAD
 - AutoSHADE
 - Alias Upfront
 - other windows CAD program
 - Paint programs - combined script from
 - Aldus PhotoStyler
 - other serious 24 bit paint program

There are thus 6 separate tests done within the screen graphics & test section. Each one should have a running time of between 2-5 minutes so we can get good accuracy, and so that we are future proofing ourselves for a factor of 4X or so speed improvement in the next several years.

Note that we would want to use both ISV apps AND Microsoft apps. I do NOT think that we need to spend a lot of time or effort actually creating the benchmarks "with" the ISVs in a serious way. We don't want this bogged down with politics, and there is no reason to do so. We probably should get

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permission from them and should sanity check the data file that we use. If this is done properly the ISVs should love this.

Some of the tests would need to be created by hand, or substantial modifications must be done to the recorded scripts. In the case of virtual memory performance we would want to allocate a ton of memory (say 16 meg) and then touch it to test paging performance. This may be better done with a synthetic program than a recorded script. The multitasking test and Windows messaging tests are other examples which may have to be written largely by hand.

This is almost certainly true of the multiprocessor/threading test. This will have to be some quasi-real example of a parallel algorithm with good scalability out to at least 16 processors. It must be able to run on a uniprocessor. There are many examples we could use for this.

The goal is that almost all tests must run on Win 3.1 and on Windows NT (in BOTH x86 and MIPS) and on Win32s. This will not be true of a couple of the tests, but in general it must be the case.

Note that we will have to review each of the benchmarks to make sure that it says something reasonable. The existing state of benchmarks in the PC industry is so poor that nearly anything we do will be better than what exists today. Nevertheless we should try to do as good a job as we can.

The application benchmarks are similar in spirit to the SPEC benchmarks, or the larger set of programs which MIPS uses for their benchmarks. The goal is to get some real programs which truly exercise the cache, memory system, CPU etc.

The ideal thing would be code samples from real products. The obvious problem with this is that we really need to distribute source code to the tests. Another idea would be to use the SPEC set. Unfortunately the SPEC benchmarks run on UNIX systems, and they have a number of problems. SPEC is the best set of benchmarks available, but even so there are a couple of bad programs (particularly matrix300) and the set is too oriented toward FORTRAN and numerical stuff.

The best solution from a practical standpoint is to get some public domain code (which may need to be ported to our OS) to create the benchmark. There should be a set of 5-10 different integer programs and again as many floating point programs. We should make sure that the programs are quite different in their composition. There is a place called the Austin Code Works which sells tons of PD software, and that is a good place to look first.

The goal in creating the benchmark suite is to provide a common standard of reference for the Windows computing community to use. The idea of doing benchmarks in each of these areas is not exactly new - PC magazine and other reviewers regularly run ad hoc benchmarks. The problem is that these are of uneven quality, and no single one of them has enough of a following that people use it as a common reference point.

The "brand identity" of the benchmark is just as important as its contents for this particular purpose. We want people to have a universal metric which can be used in advertising, product reviews etc. We want to get this to be a very common way to describe a system. The SPECmark rating has become a very successful effort in the UNIX workstation world because it is famous enough for everybody to quote. We want a similar phenonema to occur in the Windows world. The concept of how many "Winstones per dollar" and other direct comparisons will directly follow.

Microsoft should be the direct sponsor of Winstones, and we should support that with an active promotional campaign. It may also help to have some publications champion them in their reviews, but we would like this to be "neutral" enough that they become quoted in ALL major reviews, and not just in those of a single magazine. We probably want to announce the benchmark with one or a couple of magazines, but then have them spread to other areas as well.

There are many uses of Winstones in our marketing strategy, each of which may have a special implication for our system strategy. In general, winstones can be used in the following ways:

Supporting our product line strategy

We will have a number of different Windows implemenations - Win 3.1, Win32s on Win 3.1, Win NT on x86, Win NT on MIPS. Which one should people buy? Winstones should help explain this. The reason is that many of the tests are designed to test advanced features of Windows, and to scale with the available

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memory on the machine.

We would like to be able to make a chart like the following.

System	Win 3.1/16	Win32s	Win NT
386SX/20, 2 meg			
386DX/33, 4 meg			
486/25, 8 meg			
486/33, 16 meg			
R4000, 8 meg			
...			

Ideally speaking, this would allow us to directly DERIVE our system strategy from "objective" empirical results. Of course, I would not leave this to chance - we would adjust the benchmarks to make sure this is the case. This should not really require any cheating - the fundamental truth is that if we have reasonable benchmarks, we should be able to demonstrate precisely this effect. Win NT might be slower at graphics than Win 3.1 on a small display because the Win 3.1 code will be tuned assembler, but NT should make better use of large memory (8 meg and above), multitasking and it can do some of the advanced tests (multithreading etc). Win32s will be slower than Win 3.1/16 on the system benchmarks because of the overhead of the thunk layer, but it should show an improvement in the application benchmarks which will exercise large memory in 32 bit mode.

Note that one powerful reason for us to take a leadership position in creating the Winstone benchmarks is that we want to have a BALANCED and COMPLETE set of benchmarks out there otherwise the opposite will happen - people will TRASH our systems strategy. If you just measure a single niche, such as graphics performance, then you could possibly find that our higher end systems do not do as well. The default way that people approach benchmarking is rather naive and this will HURT us. If this occurs, then we will be fighting a rearward action in a defensive posture. Coming out FIRST with a benchmark which does support our systems strategy avoids all of this.

Note also that this issue becomes critical to the MIPS platform. Its primary reason for existence is performance, and the Winstone figures for it will be essential for making a case for MIPS. The central marketing message for the companies producing MIPS based Windows machines is that they can deliver more absolute Winstones than any other platform, and hopefully more Winstones per dollar too.

Selling against OS/2

The claim that they will be a "better Windows than Windows" is put directly to the test by comparing the Winstone rating for a given machine configuration. I believe that this can be a very powerful tool for embarrassing them. This can occur in two ways.

First, many of the scripts would be fully Win 3.1 exploitive. It is entirely possible that the suite will not run under OS/2.0. Even if they support the correct feature set, the tests which allocate large amounts of memory will not operate in real mode, and will be at a strong disadvantage in standard mode, so any attempt to run Windows in a restricted mode will be exposed.

Second, even if they can run the scripts, it will be hard to look good. General performance problems will crop up in many ways. Having OS/2 in memory will consume several megabytes, even if there are no other problems.

Windows accelerators

Dozens of companies are creating add on graphics boards to accelerate Windows. They have little technical guidance, and little way of comparing their efforts. Winstones are ideal because manufacturers can directly advertise how their boards effect the "Graphics WINmark", "Disk I/O WINmark" etc. The existance of a standard metric for this will help to focus their activities. Competition will increase, and end users will have a better way to judge what they're getting.

To date, most of the "accelerator" performance story has centered on display cards, but we also would like to encourage low cost RAID disks, better system caches, better printing solutions and a variety of other hardware improvements.

PC price/performance

The emphasis on "Winstones per dollar" highlights the price performance aspects of a system, and it is an excellent way to demonstrate the value delivered to the customer. This does not directly help Microsoft, but it does

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help get the Windows computing world focussed on deliering the maximum bang
or the buck to our customers, so it is useful in that context.

Selling Jumbo

The printing benchmark focusses attention on the best Windows printing
solution.. This is an excellent opporunity to highlight Jumbo and the
advantages it brings.

Selling TrueType

The font and text benchmarks are a good opportunity to highlight the benefits
that TrueType brings to Windows customers. Alternative approaches would look
pretty silly if the decrease the over all Winstone rating of a system.

Taking the technical high ground

Finally, this is an opportunity for Microsoft to take a strong leadership
position in nurturing the community of suppliers to the world of Windows
computing. Establishing a standard benchmark of this sort is a good move - it
helps both customers and IHVs develop better products.

My take on this is that it is a very important opportunity which we should
captialize on ASAP. Comments are welcolm.

Nathan

286
From georgem Mon Dec 16 12:51:55 1991
To: bradsi
Subject: Re: bullet
Cc: dennisad, elik

I talked to Chuck Bigelow about this so that I could get the
story from the horse's mouth, so to speak.

His answer was that bullets really aren't standardized by various
typographers, and so it is really left up to the "random tastes
of the artist". They had always hated the large bullets that
seem to go with every other font on the planet. He said it
seemed to them that those bullets were almost too big and that
they seemed to jump out of the page when you were trying to read
it, thereby distracting you. They brought too much attention to
themselves, in other words.

Since Lucida Bright and Sans were designed as text faces to be
used in books, they wanted a more discreet looking bullet that
would blend in better. Since they already had a zillion bullets
in the Lucida Stars font, and they knew you could always use one
of them if you were unhappy, they did the smaller bullet.

For presentations and such, it would probably be better to use
something from Lucida Stars. If you were writing a book, on the
other hand, he likes the smaller bullets since they aren't as
garish.

287
From greglo Mon Dec 16 12:54:00 1991
To: bradsi davidcool tomle
Cc: mackm
Subject: Re: Novell
Date: Mon, 16 Dec 91 12:52:58 PST

It is an installable driver which is loaded at boot time
by the a system.ini entry. It hooks Kernel's MS-DOS function
handler and critical error and munges the registers on the critical
error based on the current dos call. (It could also be a simple
DLL loaded by load= rather than an installable driver; doesn't really
matter.)

As for Mack's suggestion I don't think it is reasonable for us to
provide the workaround and not make it available to customers. If
we relegate it to a PSS fix we'd still be sending it out: it's just
that more users will crash and not report it and not realize that a
solution exists. It would make no sense to make Novell reimplement
it over again, either. The testing is an additional burden but we
are already required to do fairly massive post-beta3 distribution of

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what is the msdos 5 experience been like?

345
From jnetter Mon Dec 16 15:42:40 1991
To: lorisi winsquad
Cc: debbieh
Subject: RE: Windows Focus Squad Meeting Reminder
Date: Mon Dec 16 16:41:52 PDT 1991

RussW is in Zurich and will not be available to attend...

>From lorisi Mon Dec 16 14:36:58 1991
To: winsquad
Cc: debbieh
Subject: Windows Focus Squad Meeting Reminder
Date: Mon, 16 Dec 91 14:34:45 PST

Next meeting is scheduled for tomorrow, 12/17 at 8:30 am in 2/2103.

346
From joachink Mon Dec 16 15:43:46 1991
To: billg bradsi steveh
Subject: EMI
Date: Mon Dec 16 16:20:06 PDT 1991

Mike signed a 20 M\$ commit license today for all their 386 sx and higher end systems/per processor for WIN and DOS. This was a tough one against DRI. They will continue to ship DRI on 286 and 8086 systems honoring an old license agreement. DR was at \$3-4 with DOS, we are getting more than \$35 for WIN and DOS. The slim pack DOS helped to close the deal.

347
From debbieh Mon Dec 16 15:53:16 1991
To: jnetter lorisi winsquad
Subject: RE: Windows Focus Squad Meeting Reminder
Date: Mon Dec 16 17:48:47 PDT 1991

steveh will not be attending as well but the meeting should still take place thanks

348
From carls Mon Dec 16 16:00:05 1991
To: billg bradsi paulma tomle
Subject: ULSI
Date: Mon, 16 Dec 91 15:58:22 PST

fyi...

>From intelca!mipos3!ccm!Mike Bruck@intelhf.hf Mon Dec 16 15:27:25 1991
Return-Path: <mipos3!ccm!Mike Bruck@intelhf.hf>
Received: by mipos3 (5.57/10.0i); Mon, 16 Dec 91 13:53:32 PST
Received: by intelhf.hf.intel.com (/=/^ Smail3.1.17.5 #17.19); Mon, 16 Dec 91 13:50 PST
Received: by ccm.hf.intel.com (ccmgate) Mon, 16 Dec 91 13:50:10 PST
Date: Mon, 16 Dec 91 13:50:10 PST
>From: Mike Bruck <mipos3!Mike Bruck@ccm.hf>
Message-Id: <911216135010_2@ccm.hf.intel.com>
To: Robert Sullivan[S]_at_ccsw_fm@ccm.hf, Cindy_L_Thomas@ccm.hf,
mipos3!intelca!microssoff!carls
Subject: ULSI

TO: ESM, PR CONTACTS
THE FOLLOWING RELEASE WAS ISSUED OVER BUSINESS WIRE AT
12:00 NOON (PACIFIC STANDARD TIME.).

Contact: Pam Pollace
Intel Corp.
(408) 765-1435

OREGON JUDGE GRANTS INTEL'S REQUEST
FOR PRELIMINARY INJUNCTION ON KEY MATH COPROCESSOR PATENT
Key Licensing Issue Also Decided in Intel's Favor
SANTA CLARA, Calif., December 16, 1991 - Intel Corp. said it has

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Thanks. Alessandro

365
From bradc Mon Dec 16 16:54:21 1991
To: bradsi
Subject: RE: EMI
Date: Mon Dec 16 16:54:11 PDT 1991

yup, was there when they signed today.
sergio helped with this a bit too.
big win

>From bradsi Mon Dec 16 16:29:02 1991
To: bradc
Subject: EMI

Date: Mon, 16 Dec 91 16:28:15 PST

| >From joachink Mon Dec 16 15:43:46 1991
| To: billyg bradsi steveb
| Subject: EMI
| Date: Mon Dec 16 16:20:06 PDT 1991

| Mike signed a 20 M\$ commit license today for all their 386 sx and
higher end
| systems/per processor for WIN and DOS. This was a tough one against

DRI. They
| will continue to ship DRI on 286 and 8086 systems honoring an old

license
| agreement. DR was at \$3-4 with DOS, we are getting more than \$35
for WIN and
| DOS. The slim pack DOS helped to close the deal.

366
From gaben Mon Dec 16 16:55:03 1991
To: davidcool
Cc: a-kelm davidtry noladr richsa stevesh valorieo winwar
Subject: Re: WPG Dropping the ball on the PCT
Date: Mon, 16 Dec 91 16:53:44 PST

Ok. We're just going to keep working with Davidtry on the PCT testing
(see his mail below on Valorie's buglist). If there is anything else we need
to do, let me know.

Thanks.

| >From davidcool Mon Dec 16 16:12:28 1991
| To: gaben
| Subject: Re: WPG Dropping the ball on the PCT
| Cc: a-kelm davidtry noladr richsa stevesh valorieo winwar
| Date: Mon Dec 16 16:10:59 1991

| Clearly something is screwed up, Windows folks
| don't usually flame other groups like this
| without good reason. However, we are deep in the middle
| of getting our final beta out and thus won't be able to
| resolve until after. From richsa's original mail, it
| looks like we can deal with the gap for final beta.

| >From davidtry Mon Dec 16 14:29:42 1991
| To: valorieo
| Cc: a-kelm gaben noladr richsa
| Subject: Results of Valorie's testing
| Date: Mon Dec 16 14:29:16 PDT 1991

| Here's the most recent info I've received from Valorie. This
| is exactly the sort of data I was looking for. My comments are
| prefaced with ">>>"

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CSD is installed on the machine when you install IBM PCIP NET on it. I believe that the PCIP NET install docs state which DOS 4.00 CSD is required for it. I believe that different versions of the PCIP NET require different DOS 4.00 CSD versions. I also believe that it is very difficult to tell which DOS 4.00 CSD is installed on a particular machine, you simply have to KNOW which one is installed. You might be able to tell by looking at the date on the system files (IBMBIO.COM/IBMDOS.COM), but I am not at all sure about this.

If you are running an IFSFUNC.EXE that does not match the IBM DOS 4.00 CSD that you are running, you will get no warnings, the PCIP NET will be perfectly happy to start. Windows Enhanced Mode will NOT be happy to run correctly on such a machine however! All sorts of very very peculiar stuff will start happening. The one case I know of is that wierd stuff, breakage, hangs, reboots, bugs will start occurring. Either in windows, or in the DOS applications, or in both. I do not know the specific cases of all possible combinations of PCIP and DOS 4.00 CDSs.

I have been struggling with a machine in the network lab downstairs 1041 (NETLAB 22, IBM PS/2 model 55sx) for three days!! This problem is what was wrong with it. The IFSFUNC.EXE with PCIP NET that was installed on this machine did not match the IBM DOS 4.00 CSD that was installed on this machine.

I am inclined to say the following things:

All PCIP NET test machines are possibly broken.

The validity of all PCIP testing that we have done is at risk.

I know several factual things:

All PCIP test machines need to be checked.

All NET testers need to be educated how to not INVALIDATE both the testing and the machines.

All development folks who may be involved need to be educated.

I for one, am completely unwilling to look at anything having to do with PCIP until it has been explained, at least to my satisfaction, what the scope of the problem is. And when, or if, it is going to be fixed.

We have not been careful. We are now going to pay the price for not being careful. It remains to be seen what that price is.....

192
From spanky!operdst Sun Dec 15 17:02:41 1991
Received: by darla.UUCP (DECUS UUCP w/Smil);
Sun, 15 Dec 91 17:00:39 PDT
Date: Sun, 15 Dec 91 17:00:39 PDT
From: <operdst@darla.UUCP>
To: microsoft!bradc sergiop adamt richf dianet bradsi johnoon richba
Subject: DOS 5 mtd Shipments...

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