PLAINTIFF'S EXHIBIT 1554 Comes v. Microsoft

Lynn E. Williams (Legal)

From:	David D'Souza
To:	bradsi; davidcol; karlst
Cc:	davidw; dennisad; jeffbog; jeffpar; mikesch; neilk; ralphl; raype; richp
Subject:	RE: Os/2 2.1
Date:	Mon, Feb 1, 1993 11:36AM

Yes, the way to be super robust with 16 bit apps is to run the multivm case with a separate user, gdi, and kernel in the VM. If anything happens in the VM, we terminate the VM. This assumes VM termination is robust which isn't too bad an assumption as has been proven in practice.

But, if robustness is paramount, the MultiVM case doesn't address robustness with respect to 32 bit applications unless we also provide the ability to run them in separate VMs. If Win32 apps run in the system VM and we trash our sys vm components we will be in the same boat as Win3.1 or the peremptive 16 bit apps. I don't know what work is involved for this. Rich, we should check with JonT on this???

-Dave

From: David Cole To: Brad Silverberg; Karl Stock Cc: David D'Souza; David Weise; Dennis Adler; Jeff Bogdan; Jeff Parsons; Mike Schmidt; Neil Konzen; Ralph Lipe; Ray Pedrizetti; Rich Pletcher Subject: RE: Os/2 2.1 Date: Monday, February 01, 1993 11:51AM

As we talked about when we saw the OS/2 demo, robusness was on equal footing with responsiveness. From reading these docs, it looks like preempting in the system VM adds nothing to robustness. I was under the impression it would. If this is true, then I don't think we should pursue this path.

In the mvdm doc, it wasn't clear in option 3 whether a copy of all the gui (user, gdi, kernel, drivers) components get loaded in each VM or just a modified copy of user. The memory hit of loading entire copies is big, but that can be tolerated if the system gets ultra robust as a result. People will pay for more memory if this feature is important to them.

IBM has somehow made this pretty fast. I'm sure we can too.

From: Karl Stock To: Brad Silverberg [Cc: David Cole; David D'Souza; David Weise; Dennis Adler; Jeff Bogdan; Jeff Parsons; Mike Schmidt; Neil Konzen; Ralph Lipe; Ray Pedrizetti; Rich Pletcher Subject: RE: Os/2 2.1 Date: Sunday, January 31, 1993 9:45AM

I'm glad Bill is worried about NT. Hope he stirs up the pot over there. In answer to your question: our guys have been working hard. Following are preliminary drafts from our two task forces. They still need work, but these teams will

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MS 5046561 CONFIDENTIAL present their findings at tomorrows warteam meeting - 3pm in 1175. You're welcome to attend of course.

Developer types: Not surprising that Bill thinks your work is important. I'll take this opportunity to let everyone review the ideas from the other team (if you haven't done this already.) If you have reactions, reservations, questions, suggestions, inspirations, big R.

<<File Attachment: PREMPT16.DOC>> <<File Attachment: MULTIVM.DOC>>

From: Brad Silverberg To: David Cole; Dennis Adler; Karl Stock Subject: FW: Os/2 2.1 Date: Monday, February 01, 1993 8:24AM

how is our investigation coming along?

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From: Bill Gates To: bradsi; paulma Subject: Os/2 2.1 Date: Sunday, January 31, 1993 10:54PM

I am really concerned over everything I am hearing about Os/2 2.1.

As usual they get total credit for being crash proof. Our inability to explain they are not crash proof is going to kill us on NT because our speed problems related to NT. I wish we could make our crash proofness simple an option (dont laugh I dont think its as stupid as it sounds but of course it couldnt be done this year).

I can see the headlines now "Os/2 runs windows applications faster than NT" "Os/2 provide seperate threads for 16bit windows applications better than NT" "Os/2 runs DOS applications faster and better than NT". It seems like Os/2 is going to win in every way on 16bit applications. NT will be ridiculed for its size compared to NT as well.

I dont understand what they did technically but I am VERY impressed. I thought the mapping they had to do would prevent them from ever getting this good.

I am curious to see some real analysis of their breakthrus. We have a major challenge here that could totally blunt the acceptance of NT.

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