

## MICROSOFT MEMORANDUM

To: Steve Ballmer  
From: Adrian King  
Cc: Bill Gates, Mark Mackaman, Mike Maples, Cameron Myrhvold, Gabe Newell,  
Russ Werner  
Date: August 22nd, 1988

Re: Running Windows Applications On OS/2 Presentation Manager

**Introduction**

Bill recently sent out some lengthy, eloquent, email concerning the development of a Windows mapping layer which would allow Windows apps to run unchanged on OS/2 Presentation Manager. This raises some very interesting product positioning questions which I have concerns with. This memo is deliberately written as a counterpoint to Bill's mail. I am not trying to be rude or inflammatory, although I suspect that some points may engender a fairly excited discussion. If appropriate, I would like to arrange a meeting to thrash these issues through.

**Summary**

These are my key points:

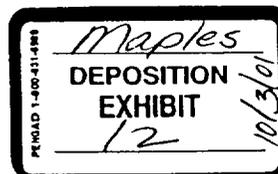
1. Every Windows ISV will have have their app converted by the middle of 1989. The need is for conversion tools, not compatibility.
2. Windows ISVs want to have apps that span multiple platforms. Very, very few Win ISV's are not planning on doing Mac apps. Since that is the case, having Windows apps run directly under PM is not a complete solution for these people.
3. Confronting an ISV with information which says: PM is going to happen slowly, there is also this funny 32-bit OS/2 on the way and we now have a protect mode Windows/386.....but we do have a way of running Windows apps, will mean that people will just write Windows apps. It would be too confusing to do otherwise. This gives us inferior PM apps, and further delays the end user acceptance of PM with potential side effects for LAN Manager, SQL Server, etc.
4. PM should be our long term, strategic, protected mode product. PM is much more popular with a far wider group of ISV's than Windows could ever be. Microsoft is the only company that can confuse this issue. PM is much more lucrative to MS than Windows will ever be.

**To Answer Bill's Points**

I have abstracted some of the points made by Bill and argued them through below.

***There are great benefits to Microsoft***

I think the real benefits are very short term. If PM is made successful then I believe we would both want and expect the major business applications to be available under PM alone. The provision of this compatibility is a terrifying project. The work that Linda Archer did says that Windows and PM really are quite different. I have reservations about how much effort would be needed to meet the goal.



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*OS/2 is going to take longer to succeed than expected*

OS/2 will be very successful with the Windows ISV's almost immediately. Since they are the only ones affected by this proposal, that is the group where the success of OS/2 needs to be measured. I do not think we are endangered here. I think they can port much faster than we could provide compatibility. They have to have a cross environment strategy anyway in order to support the Mac.

*Fragmentation slows everything down. Character mode and UNIX benefit.*

No Windows ISV has ever told us that differences in Windows and PM are causing them to do character apps or UNIX apps. People are doing Windows apps because they see an opportunity; people are doing PM apps because it is perceived as being inevitable. People who have done nothing so far can be convinced if we have a great PM product. A good Windows to PM mapping is of no interest. The only things holding people up are PM shipment, SDK quality, adequate support and end-user installed base.

OS/2 will ship in October. An optimistic mid '89 shipment of the compatibility layer would seem to be of little interest to most Windows ISVs. We should drive Windows users and ISV's towards PM as quickly as possible rather than giving them an excuse to delay.

We could make UNIX interesting to people by delivering a crummy PM or by delivering a good PM/X. The currently favoured PM/X proposal (same look and feel, different API) is also very confusing. Does this say that we think the X-Windows API is good? Does it say we think the PM API is bad? If PM/X serves to delay UNIX GUI then its a good thing, otherwise it could be damaging to the PM sell.

*Windows does have a good chance to be mainstream*

True, and I don't think massive PM efforts will blunt that opportunity: IBM bundles of Windows, the Home PC, Microsoft apps, synergy with PM, good network operation, big inroads by 386 chips.....all factors combine to strengthen the case for a company to factor Windows into its corporate computing.

*Windows apps for 8086/286/win386 and PM specific apps to take advantage of 386 & PM*

Ignoring the superior graphics capability of PM (are there really that many ISVs dying to do cubic splines?), it is very difficult to point to early specific advantages of PM. Likely early problems with performance and bugs compound the problem of selling PM. We all believe that fundamentally OS/2 with PM really is a better platform for a superior business application: 16Mb memory, a real task scheduler, good swapping algorithms, no expanded/extended memory weirdness.....but these factors must be combined to demonstrate the overall superiority of the platform. As for the memory and tasking features that Windows has: to run Excel well on Windows takes just as much memory as it would under PM. To run multiple apps is more efficient under PM than Windows. A year after release, PM will be much better than Windows if adequate resources are invested in size, speed and enhancing the desktop.

I think we need to push ISVs toward PM in order to demonstrate the superiority of the environment. An opportunity for the ISV to delay will simply further delay the acceptance of PM.

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## Conclusion

If we were to go ahead and build the compatibility layer, I don't think anyone would care about our herculean efforts later. Most of the interesting apps that are needed to be written to make PM successful are not currently Windows apps. The only Windows apps that matter are Excel, Opus and PageMaker. Aldus are specifically aiming to include PM only features as a device to keep themselves positioned at the high end of the market, with their competition (running on Windows alone) positioned as low-end or entry level. I think we are a lot better off working with the languages group and third parties to develop conversion tools.

I think we need to think very carefully about how much we want Windows to compete with OS/2 in the OEM channel and for ISV's attention. The strains that show in our strategy now are temporary, and should not allow us to lose sight of the goal of making OS/2 the next generation operating system as quickly as possible. We should not assume that the greater ease we have in moving Windows forward at the development level will mean that it can also gain anywhere near the momentum OS/2 has with the OEMs and ISVs. Blunting what momentum we have could be very dangerous.

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