

From pathama Mon Jul 16 21:18:55 1990
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Previous pieces of mail have advanced the notion that Windows is our strategic asset - both as a piece of code, and as a brand name which we would use to unify our various systems software offerings. This has lots of good things in its favor, but there is one striking loose end - what do we do about PM?

The first thing to point out is that the rest of OS/2 is fairly safe. We can position it as the underpinnings of Windows when used in high end configurations, we can sell it on the server etc. The problem is PM, because it directly conflicts with Windows.

The way that I look at the PM problem is to break it down into how PM appears to several different observers - ISVs, end users, IBM, and finally what I think our own point of view should be.

PM to ISVs

The classical ISV is a company which derives their income from selling binary software packages for standard environments. From their point of view, it is pretty clear that PM is dead. They may not all have that view today, but within a couple of months all new development on PM will have ceased (if indeed there is any going on right now at all).

That is a harsh statement, but there is no getting around it. Windows 3 is the big opportunity and will be the high volume platform to support. It offers all of the really key features that PM has, and those that it does not offer are not showstoppers in any way (and besides, Microsoft is likely to add them in the future). There is no hard technical reason not to build your GUI app on Windows rather than PM. Moving to the marketing side, Windows is hot, and PM is cold. There is urgency in developing for Windows, and none for PM at present. 1.2 is mediocre, and 2.0 is still at least 8 months away. The clear strategy that everybody is going to take is to develop for Windows and forget PM.

Our industry creates monopolies and standards because the benefit of a given environment depends on the amount of support it gets. This creates a positive feedback cycle that can take a small lead and turn it into a landslide victory. The fact is that Windows has a lot more than a small lead - it is the hottest product in the industry and it will have been out for nearly a year by the time that PM can respond with Cruiser. No matter how magical Cruiser could be, the combination of Windows strength today and the free reign it gets up until Cruiser is released make it virtually impossible for Cruiser to reverse PM's slide into oblivion. Of course we happen to know that Cruiser isn't magical at all - it will be a good product, but not something that will make Windows 3 users suck in the breath.

The implications of PM being "dead" for ISVs are:

- No new applications will be developed for PM. This means no new releases of old applications, and no brand new apps. There is just not enough demand to justify this.
- This includes no 32 bit applications. By the time that Cruiser ships, Pharlap, Metaware and others will have tools which let you use the DPMI interface to write 32 bit linear Win 3 apps. All they need to do is write some thunks etc and they are set. Even if you are 32 bit specific, Win 3 is a much larger market.
- Most of the ISVs who have PM only versions of their applications are working very hard at present to move to Windows. A few, like AutoDesk, will wait for DPMI toolkits, but they are all likely to move.
- Porthole will encourage this trend because ISVs will feel comfortable that the small percentage of users (a few percent compared to the Windows installed base by the time Cruiser ships) who have OS/2 will still be able to run their apps.

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The absolute finality of the word "No" above does not count small random developers who might not realize what is going on, but I think that it is quite accurate in describing the actions of the top 50-100 PC ISVs over the course of the next 6-8 months. If you did an ISV poll today I think you'd already find this sentiment at a lot of places. If you think about the momentum which Windows is showing and extrapolate out until next spring, it is hard to see how ISVs could do otherwise. By the time Crusier ships there will be a base of between 2 and 4 million Windows 3 users ready to buy Windows apps - an ISV would be crazy to go with any other strategy than that outlined above.

One very disturbing possibility is that PM development will not even be the second place GUI. At Autodesk they rank OS/2 as their third rate platform - dos extender and SPARC out rank it. They are doing a \$40M a year business on SPARC today, and sell very few OS/2 units at all. Given SPARC's momentum, they could easily be selling at the rate of 300K - 500K units a year by the time Crusier ships (they predict that even sooner), which is comparable or higher to what we'll be able to claim for Crusier even in a best case scenario. With Windows covering the x86 nicely, ISVs who have the bandwidth for a second project will not think of getting the last couple of percent of the x86 market and may instead pioneer a new market with SPARC.

Assuming that the point of view above is correct, I think that ISVs largely do not care about PM going in the future, since they will be riding the Windows bandwagon. Some may feel that we jerked them around, but by and large they are professionals. The lure of Windows more than pays for itself in terms of the volume opportunity.

PM to End Users

There are two kinds of end users to consider here - people who only use off the shelf binary applications, and corporate end users who may do their own development.

The perspective of the first camp will be that PM is more trouble than it is worth. Crusier lets you run Win 3 apps, but not as well as Win 3 would, and there basically aren't going to be very many apps that are native PM. There will an explosion of Windows apps, marketed AS Windows apps, and this message will come across to end users: Just the naming and positioning alone is enough to put PM at severe disadvantage - why buy anything but Windows if you want to run Windows apps?

The second kind of user - the corporate developer - is another issue entirely. The supposition is that there are corporate developers who have done significant PM specific programming - for mission critical applications or for other reasons. These people have all of the technical problems that ISVs have in making a switch, but they do not have the payoff in terms of the large end user volumes - their "customer" base is limited to their own company. These are the people most likely to be hurt if PM support is dropped in the future.

It accessing the damage it is important to ask several questions. First, how large is this category? We have talked about "corporate developers" in the past but I do not have a good feel for:

- How many people are truly PM specific corporate developers?
- Have they written right down to the PM APIs, or have they used other tools & libraries?
- How intense are their applications?
- Why did they write for PM in the first place?
- How important is it to get new features in PM over time, and run mainstream applications?

I think that it is important to understand the magnitude of the problem, and the technical details. I suspect for example that the answer to the last question is largely because IBM told them to, or because they use EE - but if in fact they used PM for some other technical reason it would be good to find out about it.

In general, I think that most corporate developers that were really

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exposed to the fundamentals of the situation would conclude that moving to Windows is the right long term move. Windows will be improved to get the best features of PM, the high end version of Windows will have the OS/2 kernel and can then run OS/2 server applications etc. This puts them in line with the mainstream of the PC industry - anything else is going to ultimately cost them far more than the conversion. The good news here is that Cruiser is the ideal transition vehicle - it will run Win 3 apps, and it will run any existing PM apps. The existence of Cruiser gives people a reasonable transition time, especially if we give them some migration tools.

One key question is 32 bit support. If, as I have argued in other mail, the 386 becomes pervasive (because of Windows, price cuts and 386 clones) then there will be a lot of pressure to move to 32 bits for most major ISVs, and ultimately for corporate developers. This is a good opportunity to make the transition to Windows - at the time that you need 32 bits. In order to support this we would have to not ship the 32 bit thunks for PM in Cruiser.

IBM

This is the real heart of the problem. IBM has invested a billion dollars in OS/2 in one form or another, and much of this is PM specific. They feel both a moral commitment to it as well as a non trivial financial stake. We were their partner in OS/2, and yet we also created the thing that will be its most immediate cause of death - Windows. They told us way back when that Windows stood a good chance of killing PM, and now that has happened.

Our fear of IBM (much, but not all of it justified) is the main force motivating our discussions on the future of PM. This is not meant as an inflammatory remark - I think that they are at least 99% of the complication in just dumping PM.

The sad thing is that I believe that even given IBM's enormous resources, there is nothing that they can do to make PM a success at this stage. Windows is too strong, and PM is still too weak. The resources of IBM - both financial and their influential position only encourages them to fight the inevitable for a lot longer than any smaller or more prudent company can. No matter WHAT we do with them to prolong the PM API, make it a peer of Windows etc, it is still going to lose. The whole industry cannot afford the luxury of supporting IBM's grand strategy just because it is important to their sense of commitment and for saving face internally.

At a high level there are two very different things we can do:

- Convince IBM that PM is dead, and work on various transition plans to help out Office Vision and their customers.
- Do some hybrid plan that allows both Windows and PM apps to be accommodated, and continue talking about carrying the PM API forward in time.

These sound similar, and indeed you could just about use the same approach for both. The key difference is that in the first case IBM stops evangelizing the PM API, and instead pushes the Win 4 API. In the second case, they keep the dream alive, and continue to push PM.

You can be as smooth and slick as you want in making case 1 sound good, but there is a world of difference in the two and this will surface within moments of making the agreement.

I believe that the second case is untenable. All we do is buy ourselves some time before we clash again. Until then they confuse the market with their PM ambitions. Windows is going to win in terms of third party support unless we stop shipping Windows 3 and put a moratorium on new Windows versions. No matter how hard they push they aren't going to get anywhere.

We often talk about this case saying "well it will just be on the disk and nobody will use it", or "we just have carry this baggage forever". I have come to think that this is complete bullshit - the fundamental situation here is that PM is as good as dead as a mass market GUI API. Prolonging its agony and giving IBM hope is not going to do us any good, and in fact will do both us and them a lot of harm. Perhaps the case can be made that there is some magic time coming up and if we just get past that without upsetting them then we are home free. I doubt it.

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This argument says that we are not going to be able to address the PM vs Windows issue until we can get them to accept that PM is dead. I am not saying that this is easy, especially if we want to walk away having them not hate us for both bringing the news and for administering the fatal blow in the form of Windows 3. I just do not see any approach which is stable other than this.

The other key thing to keep in mind is that keeping them PM alive does not come for free. Here are a couple of costs that I think are important:

- We cannot afford to continue to pay the "OS/2 Tax" by having 300 people involved in a loss generating mode just to appease IBM. This is true financially, but the specific people involved are even more valuable than that. Paying the \$30M/year is not the question as much as having a ton of good people on it, including a great deal of our senior management time.
- We also cannot afford the cost to our products of having to keep them in sync with IBM. This includes putting restrictions on Windows and other parts of our strategy (having the same shell, having the same look and feel, adding new features and technology both places in unison...).
- We can't allow them to participate in the product in any meaningful way and still have the product turn out well.
- We can't afford to pay them enough of our Windows revenue to fund their own OS/2 efforts, and they are not likely to want to continue to pump money in OS/2 at their previous rates.

The sections above argue that even if we could afford all of these costs, the rest of the industry cannot afford to do the same for their products. As a result, support for PM will wither away and our struggle will be in vain - PM will die and Windows will take over.

The ONLY reason to do the stuff above is to avoid war with IBM. I am no advocate of declaring war rashly, but I don't want to be the Neville Chamberlin of systems software either. If IBM is going to get mad enough to go to war over PM's demise, or ask us for concessions which are nearly as bad, then any appeasement strategy is just hurting ourselves for no good reason. Peace is not worth any cost, especially if it is short lived.

The alternative is to convince them that PM is dead, and that they should transition to supporting Windows, especially the Windows 4 API. We can claim that it is a "merged" API and that somehow PM is involved, but even in the naming we have to be hard core - we really need the thing to be called Windows. Another necessary ingredient of this plan would be to cancel the 32 bit APIs for Cruiser - this is discussed more below.

MS

So, what should we want? Rather than give "our" position, here is what I think we should actually do:

- Kill the 32 bit PM API in Cruiser. It is totally irresponsible for us to ship this, although the rest of Cruiser is important to the strategy and should be continued. We must cut our compatibility losses as they stand and not encourage a new generation of apps that will go nowhere. Also, 32 bits is a paradigm shift that our ISVs must go through, and this is an excellent time to include the Windows conversion.
- Position Cruiser as the key transition product between PM and Windows - it runs both kinds of apps and runs them pretty well. 16 bit PM apps run on Cruiser with all of the advantages that 16 bit Windows apps have on Win 3. In addition Cruiser runs Windows apps so IBM can tell its customers that they are not going to be screwed by the massive conversion to Windows that they see around them in the industry. Cruiser gives their PM customers at least two years to transition their corporate apps and users.
- Windows 4 (on RISC and x86) is the strategic 32 bit API for the future. We can make a couple of token PM-isms, and we should make a very select number of API improvements along the lines in Paul's mail (preemption...) but in general it is Windows stretched to 32

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bits - very plain and simple. Win 4 can have other neat new features including new APIs, I am simply arguing that the bulk of the APIs are just carried over to 32 bits without having us contemplate our navels for months about the perfect blend of Windows, PM and idealism.

- The high end of Windows 4 will have the NT OS/2 kernel and be able to run OS/2 server apps. This will be important for EE and in letting IBM get some face saving about OS/2.

- We should have a sensible set of tools for PM ISVs. For example, we can supply the controls (frame windows etc) which exist on PM but not Windows, we can convert resources etc. This should be very limited since the bulk of ISVs are already working on conversion and the later we get our tools out the less likely they are to be used at all.

- Our IBM strategy must a masterful job of brinkmanship. We should not declare war, but on the other hand we should start taking them down the road to realizing that Win 4 is the future and that Cruiser is the stepping stone. Getting rid of 32 bit PM in Cruiser is an important early step because it is symbolic of thinking of PM as a strategic asset. I think that we should avoid war with IBM at any cost of hot air and arm waving, but not any compromise that lets them think that we or the rest of the industry is going to act any differently than going balls out for Windows.

- IBM should internally use the 32 bit transition as the time to retarget Office Vision and EE to Windows 4. They need to do a ton of work to get this up anyway, and they will have Cruiser (16 bit API only) as the key platform until then.

- Our positioning for Windows is as the cornerstone of a single architecture family stretching from handhelds to RISC.

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