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From: Nathan H. May 4 15:43:36 1989
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Subject: Windows, Dos and OS/2
Date: Non May 6 15:42:27 1988

The single most important issue for Win vs OS/2 is the question of the IBM
Dos/Windows bundle -- all else pales in comparison. I think that we should do it
but with some careful controls as explained below.

What I would propose is:

1. Do the deal with IBM to bundle Dos and Win
   I believe that we can do it, and keep the product decent.

2. Reserve 386 features from Dos/Win server. The content of the Dos/Windows
   bundle is Win 3.1/36, minus the deskstop apps, plus Dos. I believe we could
   bundle the 386 stuff -- VM, paging -- ANY of it, would be a potential
   fatal mistake, as explained below. The protected mode and large memory
   features of Win 3.1/36 would remain -- it is still a hot product.

3. Encourage OMB bundle early. The date of the IBM release is apparently
   90, but what we should do is arrange that key OMBs like Compaq
   effectively start the thing MUCH sooner -- as soon as we humanly can.
   This would obviously not be exactly the same as the IBM stuff -- it migh
   just be the Win 3.1/36 packaged product taped to a box package. I think
   that it is important to get OMBs, at least Compaq, to "spiritually" get
   on the bandwagon soon. This is a lever on IBM, and it gets the ball
   rolling sooner. We might take some heat from IBM at listing Compaq
   bundle our Win 3.1/36 with IBM and work with them to integrate it with IBM.

4. Don't ship Win 3.1/36 at all. We would cancel the present plans for Win
   3.1/36 -- it would not ship. The 386 version would come out as planned. It
   late 90 -- early 91 we could bundle the 386 version with OMB, or do a
   special thing for Bluegrass.

5. Windows for the 386, and the home, OS/2 is for the 386, and the
   office. The initial positioning would be that OS/2 2.0 is the 386/486
   product and windows is the 386 product. This is extremely clear to
   people, and easy to understand. Later, when IBM has its baby machines,
   this would be refined to Windows being the home PC operating
   environment and OS/2 the office environment. This is discussed more below.

6. Continue to do technical work to make OS/2 both good, and positioned
Match the high end GUI offering. This is beyond the scope of this memo,
but clearly has to be done.

This gives you the outline. There are lots of very important things that a
not included above, but this is an interesting thing to start discussing.
Here is my rationale behind the points:

1. Do the deal with IBM to bundle Dos and Win

The main challenge here are to:

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- Convince them it's a good idea financially. This is probably not hard.
- Overcome the "strategic" objection, and the "necessity" to port all of their stuff to it.

The latter issue, as raised by Larry Loucks is the big one. The way to overcome their objections is to:

- Emphasize that this is NOT fundamentally different from Dos - it is a low-end offering. The "home versus office" positioning should help here.

- In particular, any plan that they had for Dos STILL WORKS. Larry's point about needing to port all of their stuff is bogus. OS/2 is still the strategic GUI environment. This is an enhancement of DOS. Just because you add a neat feature to DOS does NOT mean that you necessarily have to support it. This is not just playing with words - it is perfect valid for IBM to say that you can only tie in to their distributed GUI world from character mode with DOS/Windows.

- This is a good way to build interoperability in the user interface with DOS, give it a sexy new feature, and allow it to be compatible with a set of existing popular applications. It does not change the fact that DOS is the fundamental operating system.

2. Remove 386 features from DOS/Win merge.

The primary points behind this are:

- If Windows is bundled with DOS, it does NOT need to have this feature in order to succeed. I don't think that you'll lose a single sale if you take it out. With one exception which is one we want to encourage - losing a DOS sale to OS/2.

- It is an incredible risk to OS/2 to put a bunch of sexy features into DOS. End users do not need to think very hard to decide to buy DOS - adding this stuff makes it very hard to justify taking the plunge with OS/2.

- Is the view that there is little benefit to supporting OS/2 - supporting only DOS/Windows gets them almost all of the important technical features, AND has the huge sales.

- Having the 386/386 positioning is VERY important. This is discussed more below.

The question of limiting Windows functionality is controversial mainly because we all have an intuitive feeling that somehow its their birthright ship any feature they manage to implement. From a marketing and business perspective this is bogus - features belong in one product or another for market and competitive reasons alone. There is no justification for having 386 specific stuff (MVS, paging) in a merged DOS/Windows product - it is not going to increase sales to any significant extent when compared to the

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The enormous boon of being bundled with DOS. The only thing it does is remove reason to buy OS/2.

We only have one shot with something as dramatic as bundling Windows with DOS - there will be no chance to start over or correct. If we pick wrong, OS/2 suffers it will be too late to do anything about it.

3. Encourage OEM bundle early.

There are two reasons for this - get the DOS/Windows bandwagon and revenue rolling early, and to provide a stick to beat IBM with. If we can get IBM to announce the DOS/Win merge early, and we have a packaged product all set to go, we could get a lot of OEMs started very soon. Even without the IBM announcement we could probably do this with a bunch of hints and winks.

The "stick" side of it is as follows - we want there to be a quality product in the market so that they won't delay the intro of DOS/Win and they won't fuck the product up too much. This is discussed more below.

4. Don't ship Win 3/166 at all.

This is an extension of point 2 above, which says that we don't ship the 16 version in the interim. This deprives us of several months of revenue, but this is a tiny sum compared to what we'll rake in from the DOS/Win bundle. The negative is all of the stuff that is listed above - we threaten OS/2, we confuse ISVs etc. The risk of this stuff is just too great when you compare it to the very small return.

The worst problem however is that it would make it painfully obvious that we deliberately limited Windows. Having a full featured Win 3/166 come out for 6 - 9 months, then disappear and have only 286 stuff bundled with DOS would look funny.

If you really care about the lost revenue, consider that we also would remove the desktop apps from the product, which we could sell retail. Although the revenue per copy is smaller, the volume on this product is going to be pretty good once DOS/Win is shipping at the rate of 10 million/year.

5. Windows is 286, OS/2 is for the 386.

I think that it is incredibly important for people to have a VERY clear notion of our positioning. The middle approach works fine with IBM, but not with users and the industry at large. Defining a market niche is a lot like picking a border between countries - the international borders that we have are a range of nasty mountains in between, next come rivers and the worst are artificial lines drawn on the map. The Swiss have survived on that for centuries.

I think that almost everybody can understand a 286 vs. 386 positioning. Beside being clear and a high visibility issue, it helps explain what our sales numbers will be. Fast 286s are very strong right now, but nobody seriously
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expects the 386 to last long term, or think that there is no reason to move
to the 386. The same conceptual picture is what we want to push for Windows
and OS/2 - Windows is a practical near term thing, but OS/2 certainly is in
the future. We want ISVs to think that a move away from OS/2 is a neo-luddite
move away from 32 bits, paging and the obvious future.

Note that this positioning is reinforced when we roll out the 386 version
OS/2. Then we change the message slightly to say that OS/2 is the 32 bit
system for advanced processors (386, 486, 1660 ...), and Windows is the 16
bit system. As mentioned above, we would put 386 features, particularly MCA
into DOS/Windows, but not until late 90 or 91. The 386 and 16 bit
IBM machines helps use the home versus office argument as another
twist to the basic positioning.

I think that it is hard to over estimate the value of having a clear and as
transparent message for the market. The vague "low end/high end" message
doesn't cut it because it requires people to understand the feature set too
much - why is one low end? What are the differences? Of course there are
many differences today, but that is NOT the point here - even if there were
tons of technical differences you do NOT want to have to rely on this to
explain the message. The 386/386 debate on the other hand is widely known
due in part to the money spent by Intel, AMD and various ODMs to tout their
machines, and because there is lots of coverage in PC magazines about this
every machine review. Even people that don't know what the numbers mean will
see that most computers have the numbers in their name. I don't know the
technical differences between a Hercules 150 and a 160, but it is just safe to
be that the one with the higher number costs a hell of a lot more and is faster.

Objections

Here is my reply to the obvious objections and problems that this
would raise:

1. IBM would mess up Windows, so what gets bundled is poor quality.

This is certainly possible, but I think that we are in an excellent
position to combat this:

- There is not too much time for them to do the messing. This is one less
to get Windows bundle deals going early, and to keep the pressure on the

- The main thing that they would screw with is the shell (CUI stuff). I
believe that we can argue the low end/money issues/market need/threat th
we'll do it ourselves enough that they do mess with the core of

Windows.

One way to combat any bad stuff in the shell is to put (and/or threatening
to put) a good shell in the desktop apps retail package.

- Another great threat is to use Compaq and others as a lever to keep them
from screwing around too much. There was a time when Compaq and
others wanted EXACTLY what IBM had, even if it was worse. An interesting
change in the market is that Compaq, and a couple of others to lesser
extent, are feeling their oats and would be interested in taking a stand

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This is Steve's MCA vs EISA example, but restricted to a much safer topic for different shells. If IBM fucked with Windows too much, we'd let Compaq ship the old shell, or encourage them to make their own. This threat of this is the main weapon of course.

I think that the IBM relationship is important enough that it is worth the pain involved in getting them involved.

One alternative - just having Compaq do it - would be disastrous. The MCA versus EISA kind of debate would be TERRIBLE if it was directed against OS/2. I don't want Compaq poking fun of the supposed advantages of OS/2 over their system (Windows) the way that they have with MCA. The way we have allowed the features to converge this would be a BIG mistake - people would conclude that OS/2 was a bag of hot air. We just can't let any strong OEM have a good reason to attack OS/2 and that is exactly what we would be doing if we let Compaq bundle and IBM not.

2. The OS/2 message would get drowned out in the roar of Windows success.

This is a serious issue. The question hinges on what matters more to ISVs and end users - the absolute number of OS/2 sales, or the relative strength of OS/2 versus other platforms. If we do the right positioning, I think that this move will actually increase the absolute number of OS/2s sold in 90, b relative to DOS/Windows it will be small.

I think that the key thing to note here is that most serious PC ISVs are pushing the limits of the hardware today, and will recognize that they must push for the 386 features - paging today and 32 bit API tomorrow - or risk not being competitive. They will certainly want to take OS/2 1.1 platform of their VM app and port it to Windows, but they can't JUST do that if we a hard core about making OS/2 compelling at every point in time. One good thing about identifying Windows vs OS/2 as 386 vs 386 is ISVs, or any software person, will be very hard pressed to say "yes, my 286 app will be any competitor that is 386 specific". That would be crazy. The DOS/Windows sales numbers will cause people to target Windows when they might not have otherwise, but the 386 positioning means that people can't ignore OS/2 unless they only have a low end business.

3. OS/2 will never catch DOS/Windows, and thus never be a per system product.

Yes, it is true that for several years we will not catch the combination. Beating them combined is much harder than doing it separately - there is synergy in the combination.

If we follow the plan above, get OS/2 technically on track, and follow up 2 with a good fully 32 bit system, then I think that we CAN get OS/2 to dominate on the 386DX and 486, and get per system deals restricted to those processors. DOS/Windows would be per system on 286 and 386SX. Note that we do NOT have to beat Windows across the board - just have a strong niche. A 32 bit apps become popular we will ride the coattails of the 386 hardware a eventually dominate.

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Incidentally, one good thing about the i486 machine is that OS/2 will start off life as a per system deal. That will be the main condition on having people use our hardware plans (phrased appropriately for legal reasons).

Benefits

The good points of this approach are:

- The MONEY: This obviously will give tremendous systems revenue.
- It also should give great apps revenue - this is something like a 5X-10X increase in the total number of platforms on which we can sell our apps. Our success may not be completely linear in the market size, but it sure helps.

These two are huge and obvious wins, and are the main reason to do this. The strategic side is:

- Many ISVs who would have followed up their PX app with a UNIX version will now focus on Windows! This is going to soak up a lot of bandwidth for PC industry ISVs, which is a good thing for us.
- As long as Dos/Windows and OS/2 have some technical differences which are significant to end users, strength in the low end will drive both ISVs and users towards OS/2.
- We put a bullet in the head of our would be competitors on Dos like DRI, Desqview, dos extenders etc.
- Our apps division gets a tremendous amount of power, which is indirectly helpful to OS/2 if we channel it properly (getting 16 bit versions early etc).

None of these strategic factors would be worth a damn if we killed OS/2 in the process. On the other hand, if we can position Dos/Windows as described above we can avoid killing OS/2 and still reap the things above as benefits.

Nathan