Microsoft Memo

File as strategy
OS STRAG

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FROM: Bill Gates

CC: Jon Shirley, Jeremy Butler, Richard Fade, Joe Lazarus, John Sabol, Peter Neupert, Mike Maples, Scott Oki

DATE: May 18, 1989

SUBJECT: Operating System Strategy

My recent trip to Europe gave me time to gather data and think about our operating system strategy.

The DOS gold mine is shrinking and our costs are soaring - primarily due to low prices, IBM share and DR-DOS. Making Windows a strong product benefits our gold mine and protects it in the following ways:

<u>DR-DOS.</u> I doubt they will be able to clone Windows. It is very difficult to do technically, we have made it a moving target and we have some visual copyright and patent protection. I believe people underestimate the impact DR-DOS has had on us in terms of pricing.

<u>IBM's market share increase.</u> The new IBM low-end machines are designed and priced assuming they can achieve 1M in sales, in addition to their other sales. This will destabilize many of our customers and cost us a lot of revenue. I think IBM's MCA strategy and the move to OS/2 and networking will increase their share. IBM's failure to exploit the 386 or portable markets is not likely to be repeated. I am impressed with their seriousness. We can make money from them with Windows - retail yields the highest dollars, but OEM makes it a standard. OEM is the best long term.

<u>Lower prices.</u> Microsoft can't get more than the following royalties for DOS alone.

EndUser	FOB	1	2	
500	250	5	2	8016
1000	500	10	2	286
2000	1000	20	2	386 HD
3000	1500	30	2	386SX HD

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Comes V. Microsoft

We recently did a deal with Vendex at $4 and I think it was a reasonable deal. I would advocate going to a pure percentage scheme if we could figure out how to deal with:

    -system definition. Very complex. Memory, monitor, hard disk.
    -predictability.

- With Windows offered by Compaq and IBM I think we can get almost two times what we could get otherwise. I don't think any amount of system software can do better - even the world's best OS/2. Additional money would have to come per copy. OEMs are a poor per copy channel in most cases - you have to discount a lot, dilute the message, consistency, feedback and suffer delays. Marketing responsibility becomes unclear.

  I think we should consider where Windows in ROM makes sense. Our organization structure makes this OEM channel/product strategy issue complex to deal with. The OEM group is helpful but IBM, retail and product issues are outside their domain. With Systems you are split between OS/2 and Windows.

  Strength in Applications. I feel a strong applications business is extremely helpful to our systems strength. Imagine if Microsoft applications were three times stronger on the PC. If we take one category - spreadsheet, word processing or data base - we will achieve that. I think we have a strong chance of doing this during the next two years.

  Power balance vs. IBM. This is not to be taken lightly. The biggest long term problem for OS/2 in Europe is the way IBM has positioned it as proprietary but also vs. UNIX - open but not full SAA. Our being stronger helps us work with IBM.

Going full bore on Windows leaves the following major problems:

1.   OS/2 consistent
2.   OS/2 more powerful
3.   OS/2 slower to catch on
        -PR
        -UNIX
4.   IBM
5.   Use of OEM channel

Minor problems include:

6.   Language support of Windows

1.   Canavino said he thinks they ought to embrace Windows if micros creates decent applications. If not, he says we have a dilemma. His point is that a lot of apps will use micros and that will determine how people perceive OS/2. If micros is okay, then he is sure we can make OS/2 look good.

Consistency would mean:

Font format
Shell
Dumb printer tables
Spooler
International support
1   Metafile
(and probably more being alike)
Mirrors would have to run binaries. We may need to add some PM APIs.
Nathan should help us figure out how to pursue these issues. Lazarus
wonders how easy would it be to compare Excel PM to Excel Mirrors.

2.   High end. Better paging, objects, file system, 32 bit linear, SAA, true
multitasking, new technology. Over time we will be fine. I am really
keen on having OS/2 be really strong in the following areas:

1990 volume		
250k	-	IBM lovers, EE, Office
100k	-	developers
50k	-	servers
?	-	POSIX - I want to run Xenix binaries so we can attack multiuser. Olivetti says this would be the way to sell OS/2 in '90 in Europe. (Paulma - who can write a memo on the feasibility of this?)
50k	-	Japan
100k	-	DTP
50k	-	Retail (NCR?)
100k	-	Engineering
?	-	All SUN applications. I need to review their catalog. Let's get them all. Who is thinking about this? With 2.0 what are the obstacles?
150k	-	Lotus lovers

Adding it up like this gets to 880k. Is it realistic?

3.   UNIX is strong for a variety of reasons; multiuser is more important -
far more important - than we give it credit for. Government standards
are a problem - I think we need to invest more people in this. I have
been very successful explaining how a desktop binary standard is better
than a source standard when I get to talk to the right people. The EEC
meeting has me feeling better about this.

Unique applications - we can fix this one with a focused effort.
Love of RISC - the emerging liability. Other than our 860 project, 486
        help, 586 help we can't do anything more.

Decent PR should turn our Windows victory into a Microsoft OS/2
victory. I think renaming DOS/Windows "OS/1" may have real merit.

How does someone buying Windows hurt us vs. UNIX? Only if mirrors is not good or people refuse to work to exploit OS/2. I claim that even a strong Windows will not lead to this result if we develop OS/2 momentum in certain markets. With IBM's help I think 500k in 1990 is do-able. 1M may be impossible but 500k is respectable. Having Windows surprise people is proof of our patience.

4. We really don't know what to do with IBM. We've decided that having them support Windows is good. Their overstaffing threatens to mess up everything and I was very clear with Cannavino on this.

If you accept that there is a minimum of per system money and we can get it with Windows, it is hard to understand paying IBM huge royalties. I wonder how many people will run IBM systems software on non-IBM hardware. Windows being powerful and licensed broadly on a per system basis makes OS/2 per copy a distant event - forcing us to go per copy.

The nice things IBM might do are:

    -help with 860 establishment
    -not take ISVs in a bad direction
    -not promote UNIX too much
    -help with multimedia

Fundamentally do we think IBM can:

    -reduce staffing?
    -improve software quality?
    -become more market driven?
    -not JDA Windows to death?

I assume our contract state is strange. For example, I don't know if 1.2 is contracted fully and I know 2.0 is not.

I think we can get $6 - $7 for Windows/286 v3.0 as part of every DOS from IBM. I think if we come up with some reverse mirrors SOP not developed at Microsoft and make mirrors clear then we can get them to bundle Windows/286.

Windows/386 could become (1) retail only, (2) to OEMs other than Compaq, and IBM, (3) to all OEMs. We need to decide our version update policy to OEMs VERY soon!!!

How will we deal with Windows for installed base - we could do a retail upgrade with Windows. How will we get the utilities out? When does IBM find out what we are doing with Compaq? These are very serious issues. Who will answer them?

5. OEM channel. Per system money from the OEM channel is the only proven way to make lots of money. It avoids worrying about copying, COGS and end user marketing. We are good at it.

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If we get IBM and Compaq to include Windows we can make more money. I am not sure how much more. At least some, and our position is stronger. OEM ought to try to figure this out. When I think of customers, it's not as much as I would like.

Compaq - What is realistic? $25? $28? $30?
Olivetti - Already bundle. Raise price? Urgent.
Zenith - Already bundle.
NEC - Windows is nothing in Japan! Should we push it or not? Y
Korea - Can we get more from 286/386?
Tandy - Will they take it? I wonder.
Tulip - Already bundle.
Apricot - Already bundle.
HP - Real cheap. Might get bundle. *or leave in the cold*
Amstrad - Can we get more? ... ...
Japan domestic non-NEC - Unique Market - no affect?

Of course, even a 20% increase would bring down over $30M to fund our increasing systems development costs.

The need to upgrade old systems makes this Windows per system situation less pure than DOS. A manufacturer could say, "Skip it, I will tell customers to use your retail product." Do we change how we sell Windows? Let's see a memo from OEM on how they would bundle 3.0 with IBM and Compaq bundling.

OS/2 is so expensive for OEMs it is just break even. Just over US $$ for the product will last through at least 1990. I think we should accept that it is per copy until 1992 and create the demand ourselves by making it better. This will be a reasonable effort, but we have no choice but to do it.

6. Based on my view of Windows, we will need to have a QCPM for Windows. We are already doing QuickBASIC (visual BASIC), slowly. If we make OS/2 good for developers (can you debug code in virtual machines super easily?) then we might not need to use large Win memory with high-end C.

One issue that comes up repeatedly in this memo is what changes to mirrors and OS/2 are required to make mirrors apps very reasonable. We need a lot of attention focused on this.

Another issue to resolve is whether we allow non-Windows apps like compilers to use high memory with Windows or give them some way to look like pseudo-Windows applications.

The main difference between this memo and Nathan's mail of May 8th is that I don't want to hold back at all on Windows/386 and he wants it to be withheld. We have lots of existing Windows/386 OEM deals - we can't cancel them and tell them Windows/286 v3.0 is the substitute. We have a Windows/386 recall product today. There will be PR that we are suppressing features to help the

falling OS/2. Desqview will have paging - DOS extenders exist. I am optimistic that IBM, extra ISVs and features will bail us out and delaying until 1991 and <1M is okay.

I want us to release Windows/386 without deletions as soon as we can. It will confuse people somewhat. Some users will expect an "upgrade deal." It will delay OS/2 somewhat but it will help us to get IBM to allow us to make OS/2 reasonable.

I would like to see memos from people on what they plan to do in their area based on us moving ahead with [a] Windows/386 v3.0.

WHG/jlg