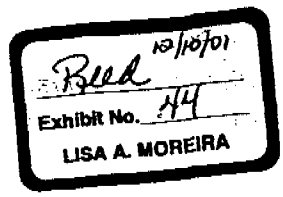


LOTUS STRICTLY PRIVATE

To: E. Belove
D. Gilmour
J. Kinlan
R. Frankston
R. Lee
J. Manzi (FYI)
D. Macmillan (FYI)
C. Digate (FYI)

From: David Reed

Subject: Microsoft Visit

Date: September 2, 1986

This is a top-level summary of the Microsoft visit, as it relates to O/S futures in general. David Gilmour may have some more thoughts on Windows in particular.

OPERATING SYSTEMS PLANS

The new news is that Microsoft is responding rapidly to the surprising demand for 386 O/S support that they had not anticipated or staffed for. They also indicated that they view us, IBM, Ashton-Tate, and their apps group as their major customers, and would like us to tell them what to do.

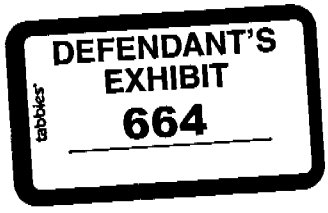
Microsoft is presently working very hard on DOS 5 for the 286. Their scheduled general availability is early Q3 '87. A very complete early release will be sent to us in a week or so.

Microsoft is in the process of revising their O/S plans, given the demand for support of 386's coming from OEM customers and Intel. In particular, the capability to run 8086/DOS 3.x programs in the virtual 8086 machine is being heavily sold by Intel, Compaq and others as a solution for customers that do not want to obsolete their current software assets. While none of the projects seem to be staffed at the moment, they are planning the following four operating systems for the 386 machines, in order of availability dates.

Xenix 386. THis system is the same old Xenix, but will perform much better, with one exception that may make it of some interest to us: it will run DOS 3.x applications in virtual 8086 mode, so that certain programs (1-2-3 among them) should work out of the current box. (avail. in late 86)

Windows/386 (previously called DOS 6). This system is the same as Windows 1, except that it will have some bugs fixed, and it will run DOS 3.x applications better than Windows does now, because it will run them in virtual 8086 mode. This allows them to run 1-2-3 in a window, since the virtual 8086 emulator allows them to remap the "direct use of the hardware" of 1-2-3 to a memory buffer that they can maintain a window with. Also this version of Windows will se the paging facility of the 386 to

LOTUS



support the LIM EMS spec, so DOS applications will have a full 640K + LIM, and windows apps may have a full 32-bit flat address space. (avail. Q1 '87)

DOS 5 for 286 on 386. This is DOS 5 for the 286 running in the 386 but using no 386 features. (avail. at the same time as DOS 5 for 286, Q3 '87).

DOS 5 for 386. This is DOS 5 running on the 386, where the additional features over 286 DOS 5 are: 1) running DOS 3.x compatibilty mode in a virtual 8086 mode, rather than real mode, 2) allowing 32-bit addressing on segments, and 3) using the paging facilities of the 386. They will split the introduction of this into two releases -- one in early '88 and one in late '88/early '89. The first release will not support paging, but will run compatibility apps and allow 32-bit addresses in segments.

NETWORKS

Microsoft has not had a network software development group for about 9 months now. THey have recently hired Darryl Rubin (a couple of months ago) to revive this area of their systems group -- he is a relatively junior type, most recently from Rolm, who I met when he was working on the Arpanet in '78. He's good, but quite narrow, and doesn't have a good perspective on the market, as was evidenced by our discussions.

Microsoft plans to release a revised MSNET (the core of the PC Network program, not including the drivers that deal directly with the IBM PC Network card or other OEM cards such as the token ring) at some time a few months after DOS 5 for the 286, so they can announce at the same time as the DOS 5 announcement. This will have essentially no new functionality, and will not solve the problems of talking to mainframes/minis on the local net, nor will they solve the "RAS" problems (reliability/maintainability-/serviceability) of the current PC NET release.

Rubin/Microsoft's perspective is still focussed on a small cluster of PC's, possibily with gateways like dedicated lines to other such clusters, with the networks serving for file sharing and printer sharing. They had no particular plans to upgrade printer support (such as handling the Apple Laserwriter or other smart printers) in the server, nor any plans to ssupport such things as mail or shared database access.

I brought up the fact that instead of leading the industry, they were expecting folks like IBM to tell them what to do in the net area, which would dramatically slow the growth of comm-based applications. They were interested, but wanted us to tell them what to do. In this area, we might be able to use them to do what we want, without acquiring the overhead of supporting all the network OEMs in the world. On the other hand, it is quite clear that IBM's requirement that DOS 5 be revised to define a replaceable file system API is a threat to any franchise they may have in this business. Promise over the network is also a threat, but one they don't know about.

GATES

Gates was very concerned that we weren't supporting them in standards activities, such as DDE, and that we weren't helping them design Windows like Ray Ozzie has, and that they never get any feedback when they give us stuff. I pointed out that we have a lot of different concerns as a company, and that public support of something like DDE was a business decision that had to be made on a case by case basis. DDE in particular was something that we felt that we needed to decide how it fit with our product line before announcing support. I pointed out that they had gotten a lot of direct verbal (not written) feedback on DDE, Windows user interfaces, and our beta copies of codeview and the C compilers, and that he should check with his groups to see if that had been valuable. I also suggested that there were areas of cooperation where we had interests in common, such as network transport and page description laguages, where it would make sense to explore cooperation on a peer basis.

Gates also said that ALL future apps. development was under Windows. He was trying to blur the boundaries between Windows and the O/S.

I pointed out in discussing DDE that there were other interchange standards to consider, such as DCA, and Gates seemed to not understand at all what that meant (he said that the Rich Text Format, RTF, would handle that for example). I wonder how IBM views them -- purely as an O/S provider, and not as an apps or standards provider, if this is any indication.

BALLMER

Ballmer exuded confidence that he would sell Windows for DOS 5 to IBM. He also agreed that we should have more regular contact, and in early October he would like to bring some folks out here to talk about 386 stuff, networks, etc.

WINDOWS

I'll leave it to Gilmour to summarize this area, but several observations are in order:

- Microsoft continues to blur the boundaries between Windows and DOS for their OEMs (Windows/386 being the first DOS-based 386 O/S).

- Windows internationalization is poor. Besides supporting double-byte strings, there is no concept of Kanji support (input, for example).

- The next release is still in flux, and may not yet support such things as the 8087, and other areas where the previous release was screwed up. However, they are planning to support the NEM stuff, and run code out of LIM EMS.

CLOSING THOUGHTS

Microsoft on the systems side seems to be stretched mighty thin by the 386 stuff that they are now attempting. They talk about being frustrated with having to finish off DOS 5 so fast, and whether it would make sense to skip support for the 286.

They are not going to drive the network side, and seem to have no idea of network stuff as a basis for group productivity or corporate info center applications.

The languages group seems not to fully understand their new role as supporters of software developers -- features needed to help systems and apps developers (like features needed to work properly with Windows, optimizations for code models with far pointers that will be important in DOS 5) are taking a back seat to end-user support (such as new versions of Basic, enhancements to the libraries, incremental compilers, etc). They in fact had an argument in front of us with the systems people.

We have some opportunities as a result:

1) with microsoft or without, develop connectivity approaches that go beyond msnet to support corporate info sharing needs.

2) exploit their Windows-blinders on the app side.

3) work with IBM on coherent corporate-needs-based solutions. Microsoft shows no interest here.