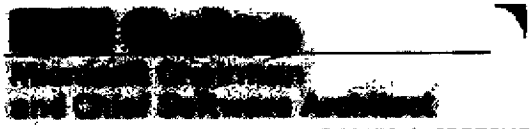

Remarks by Bill Gates
Microsoft Corporation
Gartner Symposium
Monday, October 6, 1997
Orlando, FL

Plaintiff's Exhibit
6169
Comes V. Microsoft

Scott Winkler: It's great to have you here again. Let's start with one of your favorite topics and one that I know our audience is most interested in: Windows --Windows NT, Windows 95, 98, Windows CE. Talk to us about the future of Windows. Where's it going?

BILL GATES: Windows is gaining a lot of momentum. We're putting over a billion dollars a year into developing Windows. And a very high percentage of that is now focused on Windows NT. The Windows NT 5 release that will be out next year is a very big milestone for us. In fact, we've just sent out over 200,000 copies of that beta to the people who are part of our developer program. Because the price of memory has come down and because Windows NT 5 now has a superset of the Windows 95 capabilities --it's got the plug and play, power management, all of those things -- and because there are more and more drivers for Windows NT, we're saying pretty directly that as you plan new deployments, we think Windows NT for businesses of all size will be the best choice. Now that doesn't mean people will switch overnight, but it does mean that in terms of picking memory for those systems, in terms of developing applications, Windows NT is going to be more and more the center of what goes on. And we've seen the volume climb quite a bit this year. And over the next several years we expect it to be the vast majority of what's getting installed out there.

Windows CE has a pretty specialized role. It's for devices that aren't full screen devices. It's for a pocket-sized device or a TV-connected device or a device in your car. And we see those things being very complementary -- being able to exchange information easily, being easier to work with in the mobile environment.

And we're very excited about Windows 98. It represents an evolution from Windows 95. There's nothing dramatic there. Applications start up 30 percent faster. There's a lot of feedback we've had from users in terms of refining the interface. But it doesn't require more memory. It's really the simplest upgrade we've done. So some people will go ahead and do that as a simple upgrade, but most people will really start to plan around how they get to Windows NT. Because Windows NT, in terms of its richness and reliability, is really where we're putting most of our energy.

Scott Winkler: What are you saying to Windows 95 users in businesses? Are you telling them to get ready to migrate to Windows NT with version 5?

BILL GATES: Well Windows 95 is a great product. People can keep using that

as long as they'd like. In fact, some people choose to wait until they replace that hardware on their three-year replacement cycle before they move up to Windows NT. So it will only be as the new machine comes in that they'll upgrade. Some people, because of their applications, will actually choose to upgrade in place. Windows NT does require more memory than Windows 95. Typically it requires 16 megabytes more memory. So if you've got the machine full, it's going to take 16 megabytes more to do what you've been doing there. And so there's a question, is it worth going back and putting that memory in or waiting for that refresh cycle to come along.

Scott Winkler: And Windows NT is also a major server operating system. And version 5 comes with a major technology upgrade involving the directory features in Windows NT. First, do you see the directory features in Windows NT being deployable in large enterprises at first release, or do you see it growing in size? How large an enterprise would you be comfortable in implementing on the first release of Windows NT 5?

BILL GATES: There are really two big things to think about. One is the Active Directory, and the other is the work we've done on cost of ownership, which I'm sure we'll get to. In terms of the directory, what we're using is the Internet directory protocols and DNS. And so when you put a node up with Windows NT, either in your corporate network or in the wide area network, the way we negotiate how to find a machine is using those Internet protocols. So of course the Internet's got millions of machines on it. That's a protocol that's shown a great deal of scalability. In our labs, we've got Windows NT 5 set up now with many hundreds of thousands of users and literally hundreds of thousands of servers, and that's part of the test cycle that we're going through there.

Now no one upgrades his or her entire network all at once. It's always one server at a time. And so whether you have NetWare servers, UNIX servers, or previous versions of Windows NT, you can just take one server and move that up to NT 5. Now the more Windows NT 5 servers you get, the more you can use the advanced features where you have a lot of flexibility in how that directory is set up. And so we do expect corporations to start in a server at a time, even in the very largest networks.

Scott Winkler: Do you think that networks the size of one hundred thousand nodes or even multiple hundreds of thousands of nodes will have been well-tested by the time the system releases?

BILL GATES: Windows NT is being used to run our Internet servers, which are the servers getting the most traffic on the Internet today, in aggregate. There will be a lot involved in the beta cycle. We've been fairly careful not to pick an exact date for the shipment of Windows NT 5 because we always go to the customers who are involved in the beta test and let them decide if it's ready to ship. Have they've done the really incredible stress tests that are important to them? And because of that, we'll just make sure that everybody's enthusiastic about it. The number of years of testing against Windows NT before it goes final will actually be greater than almost any operating system that's ever been used in all history. Inside Microsoft, Windows NT is typical in that we have more testers than we have developers. And of course, testers spend all their time doing testing and developers spend a substantial part of their time involved with the testing.

So when you think of Microsoft people think of a software development organization, which we certainly are. But actually testing these systems and making sure that the variety of hardware and networking protocols all comes together is a huge expense, and it's very important that we do that before we

put a system out into deployment. Because once we go to deployment, we'll be selling literally millions of servers a year.

Scott Winkler: Well we will want to talk about cost of ownership of those servers and desktops. But before that, Darryl has some questions about Java.

Daryl Plummer: One issue with Java today is beyond your "embrace and extend" strategy, you seem to be a little more comfortable battling Java directly. Is this an accurate observation, and if so, how will that play forward in the next few years?

BILL GATES: Well Java's an interesting issue, and it's certainly getting a lot of the headlines today. Java's a new language. It's not the last new language that will come along; there will continue to be innovative languages. And like every previous new language, it won't replace the ones that will come before. When I said at our developers' conference that I thought that C would continue to be an important language, I got applause. People were just going nuts because they know they've invested a lot in that language, and they know as they write programs they want to still be able to have that choice. Even COBOL today is very, very strong, and has very broad usage. Visual Basic is actually the most popular of all the languages. So as we've come into Java, we've said this is a very worthwhile language. Our tools are the most popular for Java. In fact, even though it uses the byte codes that makes things a fair bit slower, we've been able to deliver the fastest Java performance of anybody and built that into our products.

So Microsoft is behind Java as a new development tool. The place that we get counter to Java is when somebody says, hey, take your IT budget and go and rewrite your software because of some religion of purity. We say, why? Aren't there other issues that have more business benefit than just going and recasting in the latest hot language? The other issue is in the case of some applications, you really do want to take advantage of the computer they're running on. You want to use the security model and the user interface and the high-speed multimedia, or even layered software like Notes or DB2. So we don't agree with this notion that all software will run on a wristwatch and will run on a large computer without any dependencies. We don't think that people who choose software to work with will be so agnostic. It's nice for the developer, but just think of the user. They want that integration. They want the appearance that they've come to know and love, whether it's a Macintosh or a Windows machine or one of the variants of UNIX.

Daryl Plummer: Well Java's developed a great deal of mindshare in the marketplace, and certainly it gets a lot of coverage. There often is a difference between what people believe a tool or a language might be able to do and what it will wind up ultimately being good for. How do you see that turning into reality? What will be the reality of Java, and when will it become that reality?

BILL GATES: Well today Java's reasonably immature. Some of the pieces just aren't there yet in terms of making it effective for a large development project. That's going to get better and better. It's not just Microsoft, but many of the tools vendors are now accommodating Java as one of the languages they support. It's a language that's harder to use than C, but not nearly as hard as C++. It turned out there was a gap there, where even though people were saying they were using C++, the syntax was complex enough that people just weren't fully exploiting it. And so Java found a really good response from a lot of people. There are a few places where Java is actually going backwards. For example, out on the Web, there used to be more sites that use Java than do today. Because what people have found is that if you

want a fast site, you can use rich HTML and script, because script doesn't force you to load up new things.

DIFFERENT SPEAKER: And that includes your site as well, right? Microsoft.com?

BILL GATES: Well the first people to switch away from it were people like CNET, PC Week, InfoWorld, in terms of wanting their sites to respond well. And the script approaches have become richer. On our site today 90 percent of the applications running there are script-based applications.

Daryl Plummer: Then the removal of the Java Applets from your site--is that something you see as a temporary thing until it stabilizes a little more, or will you see other alternatives there?

BILL GATES: No, if you want breadth -- if you want to be able to run, say, on a Win 3.1 system, a 16-bit system -- Java's never going to run reasonably there. So if you want breadth, HTML along with script is going to be the best solution. If you want to write an application where you know it's all 32-bit platforms, then Java's a reasonable choice. But for your Internet site where you want to reach out to anybody, no matter what kind of computer system they're calling in with--even consumer electronics devices like Web TV--then the only common denominator there is going to be HTML, which fortunately does continue to improve, and script, which also gets better and better.

Daryl Plummer: That brings in a lot of different options for people--a lot of choices between dynamic HTML, Java, ActiveX, scripting tools. Is it something that you believe will just continue to explode in complexity, or is there a solution to all of that?

BILL GATES: Content developers need a clear message. And if you look at the trend over the last six months, that message is pretty crisp now. Which is if you do server side logic that then issues out HTML and script, that is the best way if you want to get at everybody. Now inside a corporation where you know your machines, say, have been upgraded in many cases, then you can use other approaches. Then you could use rich controls like Active Controls, or you could use Java Applets. You could use any language. We even let you, with Visual Basic now, put your application up on a page, and you just click on it, and it comes down to the system. So the ease of deployment that people think about on the Web, where you just go and click somewhere, and boom, it's all set up on your system, that's become language-independent. And C, Basic, every language now lets you put the applications up there in that automatic download fashion.

Daryl Plummer: So that would mean that Java would be less of a panacea, clearly. And there are technologies for solutions out there that are evolving over time. What do you think will be the most important technology that you will evolve in, say, the next two to three years that will encompass this distributed computing world?

BILL GATES: The big thing we're doing is building into Windows NT very rich services like transaction management. It's been too hard in the past for people who have had to write distributed applications. In fact, if you looked historically, it was really CICS that made it practical for people to do transaction systems. They didn't have to write a lot of code. They didn't have to think about all the different processes and coordinating those processes. And except for the mainframe, there was no equivalent of a transaction server that was built in all the tools, very pervasive, easy to get to. And that's what we're doing now by taking our transaction server and building it into Windows

NT. Now we could have said, OK, this is an extra-cost option. But if you want to really promote a software architecture and say to people, look, this is going to let you run applications across multiple servers, the best thing to do is to integrate it down into the operating system, just like we have with IIS, for the Web service capability. So bringing together the best of the Web and the best of client-server and having all of those services so that even hundreds of lines of code let you write meaningful applications--that's probably the biggest thing we're doing for corporate applications in the years to come.

DIFFERENT SPEAKER: Now Bill, you mentioned that you want to bring things like IIS and the transaction server into the operating system deeply. But there are other pieces of Microsoft middleware that you've chosen to port to other computing platforms, like UNIX or mainframe MVS. Where do you draw the line? We'll see DCOM on UNIX, but you're saying we won't see transaction server on UNIX? And how does the developer deal with the fact that that seems to be random?

BILL GATES: We've taken all of our interfaces and made them available on UNIX. So the COM object model approach is available on UNIX. Even the APIs we use to call transaction management are there. Now it won't be our transaction server, because MTS, Microsoft Transaction Server, is only available on Windows NT. But the other people who do transaction servers on UNIX are supporting those same APIs. And so if a developer wants to be available on UNIX and on Windows NT, they can use COM and they can use those interfaces and still be there, because other people are doing the middleware pieces that bring UNIX into the picture.

DIFFERENT SPEAKER: Now you've chosen to do those implementations on UNIX through partners versus doing it yourself at Microsoft. Why, and what can you say to this audience to make them comfortable that your partners will bring Microsoft technology to them as well as you would?

BILL GATES: That's been a significant issue. As we've said, hey, COM is a great interface and structured things around that, the incredible volume we have on the desktop and all the bottoms-up applications that are built there has made COM the popular object architecture, and there's a huge market of people who sell COM components. But when it comes to getting that out on UNIX, the approach we had of being somewhat stand-offish and saying, here's somebody who's done it, and yes, we gave it to the standards group--I don't think that was as much as people wanted. And so now we're stepping up to it and saying, we will support, we'll stand behind those COM libraries, whether it's on Solaris or AIX or HPUX -- that even though actually Software AG did most of the work, you can count on Microsoft to always keep those things up to date and put it into all of its normal support programs.

The whole thing is based on the feedback we get from software developers. The magic of Windows is that it's created volume enough to really grow the software industry. And so we're sitting down and talking with package software developers, from very small ones who do very vertical things to people like SAP, BAAN and PeopleSoft. All the time we say, what do we need to do to Windows? What do we have to put into transaction server? What do we have to do to make COM cross-platform in order for you to really take advantage of what we're doing here? And so strengthening the cross-platform message of COM was one of the things they asked for and that we had to do.

DIFFERENT SPEAKER: And so you're saying you're willing to do support. Does that mean that Microsoft will have UNIX expertise in-house and UNIX servers available for your support people?

BILL GATES: Oh we have substantial UNIX expertise. I mean, interoperability is a huge part of the work we do. Whenever we do a new release of a system we've got to test SNA Server; we've got to test that our transaction server works with CICS; we've got to make sure our database gateways like ODBC, which has become a very broad standard that works with DB2 and Oracle, work. So we have to have expertise in all the different systems. Windows is enough at the center of things that it's required to connect out. It's required to have the best Macintosh connections, the best mainframe connections, the best UNIX connections. And so each group has had to bring in the expertise to deliver on that.

DIFFERENT SPEAKER: Well the one that you would want to cover with this group as well would be traditional mainframes--MVS OS 390. So you expect to extend the reach of cross-platform support to a traditional mainframe and do you expect it to continue to play an important role in your customers' IT plans?

BILL GATES: Well mainframes are a central part of people's IT plans going out way, way into the future. And that's why we've had products like SNA. That's why we have this interoperability between our transaction servers and IBM's. The number of new applications people are writing for the mainframe I'd say is smaller today than it was in the past. So in a lot of cases, when they do something new, it's targeted to our platform. In a few cases, they want to target the new application to our platform and the mainframe. And that's why we have developed the COM components for MVS. Now in order to make that a really strong story, we'd have to get IBM enthused about it and behind it. To date that has not happened. We'd certainly be pleased if we could do that. And I'd have to say our relationship with IBM--although we've got the conflict; we compete on Notes in a healthy way, and with some of their other products--there is more and more collaboration as we see growing the market for Internet commerce as being a great opportunity for both companies.

DIFFERENT SPEAKER: And how do you collaborate with IBM on Internet commerce?

BILL GATES: Well the key group we work with is the group that does their PC hardware. They're our second best customer in the world after Compaq, because they continue to be very successful in selling PC hardware. And so there's a close relationship there in terms of how do we get PC hardware to be more manageable; how do we get the graphics to be richer? And they've done very well working along with us in those areas. You wouldn't say they're a partner in the same sense that a Compaq or an HP or a Dell is on the hardware side or the application software developers are of the software side. But a lot of their business and a lot of our business is mutually interdependent. And both companies are taking a very long-term view of how we work together, cooperating, and then in some areas just competing.

DIFFERENT SPEAKER: Well one of the areas where you have been cooperating with them and others is in the area of service and support, where they are picking up a lot more opportunities for consulting and value-added services on top of the Windows NT platform. This has been a strategy for you for a long time--to rely on others, partners, to provide the bulk of the Windows NT services in the industry. As you've gone further into the enterprise and spoken more to large organizations, do you feel you need to change tack there and do more services directly from Microsoft or are you satisfied with the partner model as you've had it thus far?

BILL GATES: Our primary approach is to work with partners. And given the volume of Windows NT, there is no company that could do all that integration

and training themselves. It just wouldn't be possible. We really need Digital, HP, EDS, Andersen, and thousands of our Solution Provider partners in order to do that. Now we're growing our service capacity very rapidly. Microsoft Consulting will grow from about 1,000 to 1,400 people in the course of the year, and that's just going full speed. The size of our sales force and the breadth of accounts we're able to get out to and talk with directly--that will grow quite substantially in the next year. So the enterprise opportunity does have us expanding the support offerings, including the 24-hour support, the consulting, and the sales force group. And if you look at the partners, you'll see them expanding their capacity related to Windows NT and BackOffice as rapidly as they can as well. And that's because of the incredible momentum there.

Our core expertise will continue to be software development. We're a very focused company. We think there are exciting opportunities there, and having a company optimized around that is the right thing. And we're glad to let the big service opportunities--coming in and writing code for people, that kind of thing--be a specialized business. So we don't have the same overlap with those companies that, say, an IBM or an Oracle might. But for what we do, the demand is there and we have to respond very rapidly to it.

Daryl Plummer: In the area of enterprise scalability, for software developers, certainly one of your flagship products is Visual Basic. We get often asked about moving Visual Basic up into more complex enterprise scalability. I wonder if you could comment on where it is today and what pieces you think would need to be added to turn it into an enterprise-class best-of-breed development environment.

BILL GATES: Our philosophy with tools has been to create an integrated tool set. In the same way we have Office and BackOffice, now we have this Visual Studio that's got Visual Basic, C, Visual Interdev and Java as the native languages that we support. And there's a lot of requests for strengthening the source code control which you've seen now in the latest release; the repository, which just came out in the latest release. People are asking for richer data modeling. We have a little bit of that in there but we're going to go a lot further. They're asking for hooks into all the CASE tools that are out there. And rather than do all the different methodologies ourselves, we're letting third parties come in and connect those things up. It's sort of ironic that we're delivering on the vision that was part of that SAA era. We're actually doing that now and doing it for systems that are far more distributed than people were talking about back then. With Visual Basic, the ability to use it for enterprise applications really comes from the plumbing--making it easy for Visual Basic to call Oracle, making it easy for it call the transaction server. So the Visual Basic programmer doesn't have to think in terms of, what if this system doesn't work? What if this communication link goes down? All they have to think about is what's the best interface for the customer and what's the business logic that I want to put behind that. And so there are examples of people moving up and doing very demanding things with Visual Basic, including customization of popular package software like SAP, BAAN and PeopleSoft. We've gotten those people to build in the COM interfaces that mean that Visual Basic can hook on, and so you get the benefit of the package software along with whatever customization you want to provide.

Daryl Plummer: In the area of cross-platform, independence of platforms, with the mindshare as we mentioned, that Java has, and the popularity that Visual Basic has, and certainly your focus on that, are you looking to create any kind of a universal virtual machine for any of your tools or for Visual Basic in particular?

BILL GATES: The universal virtual machine--the idea of byte codes--it has a role. But in most cases, you want the program to run as fast as possible. So for every one of our languages, we'll let you compile into byte codes when you want to, but we'll also let you compile into native code. If you want to target, say, the Intel instruction set, which is well over 90 percent of the machines by volume out there, it makes sense to do the native compilation, because people don't want to sit and wait just because you were so lazy you didn't want to issue the compile command. There are other cases where you might want to have the byte codes. Certainly for compatibility with the Java virtual machine, we're going to support byte codes in an efficient fashion and do what's called on-the-fly compilation, the just-in-time compilers. The JITs will never be as good as native compilation. Native compilation has always got to be part of the mix because that's going to give you substantially higher performance.

DIFFERENT SPEAKER: Do you see more of a role for virtual machines and translations and just-in-time compiling on non-computer devices such as those that are in the home--Web TV, for example-- and other consumer devices that are not necessarily PCs where there's more hardware diversity, where we don't see as much Intel dominance?

BILL GATES: Well definitely there will be quite a variety of microprocessors in the pocket devices and TV devices. Intel's decided to get into that space, but there are a lot of other people there. And so Windows CE has now shipped on eight different microprocessor architectures, virtually every one you can name, because there are manufacturers who pick each of those. And so the operating system itself will be compiled native. And a lot of the applications will. But in the case where you don't want to take the time to do the compile, being able to send the byte codes around is something that Windows CE will support. If you know the target you're going to go after, do the compilation. But if you don't know which machine it's going to run on, then fine--give up the performance and distribute the byte codes. And all of those things are compatible with the Windows family.

DIFFERENT SPEAKER: Will there come a time where performance improvements from microprocessors are so large compared to where they are today, that Moore's Law just continues to deliver greater power, that the difference in performance between translation and compilation will become less important and less significant?

BILL GATES: Applications always become more demanding. Until the computer can speak to you in perfect English and understand everything you say to it and learn in the same way that an assistant would learn -- until it has the power to do that -- we need all the cycles. We need to be optimized to do the best we can. Right now linguistics are right on the edge of what the processor can do. As we get another factor of two, then speech will start to be on the edge of what it can do. Motion video is just on the edge of what it can do. And so being inefficient will never make sense. Because you're not providing any user benefit if you don't go ahead and compile the code when you know what the target processor is going to be.

DIFFERENT SPEAKER: Well in talking about computer technologies and where that's going, we also have to address the issues of bandwidth. It would be interesting for the audience to hear your view of where bandwidth is going to grow and where the prices are going to come down, and when it's going to be more applicable to larger groups of users to have the efficient, large pipes that they need to take care of just today's applications, let alone what you want to deliver in the future.

BILL GATES: Bandwidth is a big issue. Unfortunately it's not like

microprocessors where every year you're going to see exponential improvements. Digging ditches--the machines that do that don't improve at Moore's Law-type rates. They improve about three percent a year. And so it's going to take time to get the infrastructure built out to all the households. Now corporations have pretty high-speed networks today. And the cost of connections across the Internet will be getting lower and lower there. And so you're going to see a little bit of a dichotomy where the business world can deliver things like audio and video and rich applications. But when you connect up to consumers you have to be very careful about how you're presenting that information. Microsoft's investing heavily in ADSL and cable modems to drive forward those consumer connections. But it will probably take a decade before you have even 25 percent of the homes connected at better than just dial-up speeds.

DIFFERENT SPEAKER: You also invested heavily in a cable television company. How does that fit in with that?

BILL GATES: We made a minority investment in Comcast, and all of that money is going into their rebuild program to make sure that they can support cable modems in all the communities they're in. They're a bit of a showcase for us to demonstrate that when you get that bandwidth there, the new capabilities, like being able to update your software automatically, being able to have somebody look at the screen of your machine and help you out, being able to browse the Internet--that it really brings out a lot of new uses. And so I'm very bullish, given the right time frame, about both ADSL and cable modems. And our partnership with Comcast is there to illustrate the opportunity.

DIFFERENT SPEAKER: Does it matter to you which one wins or if one or the other comes out ahead?

BILL GATES: In fact I don't think either can win. Because in order to get the cable companies to move fast, they have to be worried about the phone companies. And in order to get the phone companies to move fast, they have to be worried about the cable companies. And so in things like microprocessors or other areas we're doing software, but we want to make sure that the bandwidth shows up. We're helping every approach, whether it's satellite, wireless or these other two, to make sure they move as fast as possible. It's not our business--we're not going to own wires or networks. We're going to stay neutral to the different approaches. But the pace of development is something we'll be pushing.

DIFFERENT SPEAKER: How can you say you're not going to own wires or networks when you've got a minority investment in a big cable company and you're also, I guess, personally invested in Teledesic--that may not be a Microsoft investment.

BILL GATES: That's right. Teledesic is a very ambitious thing to connect up every part of the globe. And because it's satellites, for cities we won't have the coverage there. But for somebody who's outside the cities, it will never be economic to run fibers to them. And so one of the satellite approaches--maybe Teledesic, hopefully Teledesic--will be the one that drives that. Microsoft itself has gone to the phone companies and we've said, look, if they want a minority investment to help drive ADSL, we're glad to do that. But it's not our core business.*When we get up in the morning, what we're thinking about is software that's reliable, software that has a natural interface, and all the feedback we're getting from customers about where they want our software to go. That is our total focus as a company.*

Daryl Plummer: With all the things that you're into, certainly an ironic situation is that now you are the big kid on the block, as it were. And certainly in some cases it could even be perceived that you are the IBM of the '90s. Does that bother you at all or does the perception of you being the bad guy by customers or potential customers bother you at all when you lay down at night?

BILL GATES: Certainly our competitors like to think about us in very strong terms. And I'm sure IBM experienced some of that in their heyday as well. It's important to recognize that *our model is very different than IBM's old model was. We have HP, Digital, Intel, Compaq and many others, and parts of IBM, who get up every day and think about things that are totally complementary to what we're doing. We have the service and support organizations from the large ones to the small ones who are very complementary to what we're doing. We have the vertical application developers who see Windows as the opportunity to get out there and have high volume for the great work that they do.*

For Microsoft, we've never found a case where we're more than two percent of somebody's IT budget. And yet the work we do in terms of simplifying their network, letting them user virtual private networks, or the work we're doing on cost of ownership--we can save them far more than the software licensing costs by a huge factor by working closely with them and really developing our software in the direction that they want to see it go. So it's quite different than it used to be. This is the world where people can pick hardware from anybody. They can mix and match, use different things in different locations, and know they're in the mainstream. Know they're working on the platform that all the great new application development is being done for. And that platform just gets faster and faster and faster as all these companies come in to make their contributions.

Daryl Plummer: How do you deal with the perception that comes in that there is no competition for Microsoft out there? This is an often unfair claim that's made. How do you deal with that when you're dealing with new customers and bringing them into the fold?

BILL GATES: Well, it's interesting. You know, *sometimes in the course of one interview, you'll have somebody ask a question like, well, clearly you're going out of business because Java and Netscape and all these things are going to put you out of business. And then later in the interview they'll say, by the way, you have no competition. And so it's hard to know which it is. Are we going out of business, are we too powerful? I don't know.*

I'll tell you how it feels from where I sit. It feels like a great position. Because we are in the lead in software. We put over a billion dollars a year into Windows, over a billion a year into our other products. And customers are telling us all the time the things we need to do better. And so we have that guidance to set our priorities. When it came to the Internet, we weren't there as fast as we should be. We got that feedback, and boom, we've moved very quickly, whether it's browsers or servers or development platform there, and I'm very proud of what we've done.

Cost of ownership--Gartner deserves a lot of credit for highlighting that as a very big issue. And that, again, is something that we said, boy, this is important. We need to understand what it means. And so we went to customers and started to understand, what are their data center costs, their communications costs, their application development costs, their PC hardware costs, the support costs. And how can we impact those things. We took the word "total" and actually expanded it out to include the entire IT budget, and

then also looked at the value. In the world of the Internet, will people need to make quicker decisions? Will they need to have more information in the hands of their employees? How do our products fit into that?

If we fall behind--if, for example, we hadn't done the Internet work, or, for example, if we're not the first to put speech recognition into the operating system so you can work with it in a natural way--somebody's going to come along and replace us.*Our current products are not the thing that give us strength. It's the people we have and the way we use the customer feedback loop to move forward.* And so there are challenges. It's not like being Coke and knowing 20 years from now, you're sure to be the most popular soft drink. No software company has that kind of position. But we're the incumbent, and as long as we work hard, we're likely to stay in the lead.

DIFFERENT SPEAKER: Have you changed the way you do business in any way based on the level of scrutiny that you've had from government organizations regarding anti-trust issues?

BILL GATES: I wouldn't say we've changed anything we do based on that. It makes it a little tougher when we think about an acquisition. We have to say, is this something that will get through quickly, because in the world of technology, if an acquisition's going to take you two years to get approved, it's almost not worth doing. So that's the only footnote I'd put there. I would say that our success has put us in a position of responsibility in terms of growing our support, growing our consulting. Even though the percentage of the IT budget that goes to us is very small, it's very key for us to show our future direction so people can understand where we're going. And we have to be very predictable--evolving the tools, evolving the user interface, and working with all of these partners. And so as Microsoft has gotten more successful, we've had to do business in a different way.*We've had to even slow down some of the innovation to make sure the marketplace can absorb it in the right way.*

DIFFERENT SPEAKER: Slow down innovation so that it can be absorbed. Does that concern you that people will take that to believe that you'll have technology but you'll hold it back, waiting for the right moment to introduce it? That's sort of almost sounding like you want to control the flow of technology.

BILL GATES: No. The key thing here is, do you make releases every three or four months and say, wow, here's this great new thing, or do you hold things so that every two years you take all of it, package it together, make sure it's extremely well-tested and reliable, and come out with it as a major release. And so when we think of Windows NT, although we think of yearly releases, the one that's every other year will be actually a pretty minor release, and the major releases will be two plus years in between those coming out. Now that forces us to have a lot of discipline, to take all the innovative things going on in the company and get them out in a common release and they have a common theme that makes it easier to understand. So it's not a case of slowing down innovation in any sense; it's how do we package that up? How do we bring that out to the marketplace? And we've had a lot of releases of products, and people are saying to us, why don't you package this in a different way.

DIFFERENT SPEAKER: Well one of the areas that that addresses that I know you want to talk about is the cost of ownership. So why don't you take a few minutes now and tell us what you're planning in the next couple of years to address the cost of owning both desktops and then, more importantly, networks of servers.

BILL GATES: Well PCs are, in some ways, fantastic. They're portable; you can go out and buy software; you can add peripherals into them. People feel very empowered because of the information they get on the PC. So that's the good side. The bad side is that you get so much "state" on that PC that each one becomes a mystery. You know, why does something not work on this PC that works on this other PC. Let's say you want to upgrade from one PC to another. How do you transfer what you've done there onto that other machine? And so all that state and storage on the PC has started to work against us. And this is one of the big insights we had as we really went in and looked at cost of ownership.

What we've done with Windows NT 5 is put in what we call IntelliMirror. And this gives you the best of centralized storage and local storage. You need local storage for portability; you need it for high performance; you need it for flexibility. But central storage is much better in some ways, because it means everything is always up to date. Everything is backed up. If your machine fails, you go to another machine. You just connect up to it in central storage. If you travel somewhere and log in and you want to see something, it's there. And so how do we get the best of both worlds? Well the answer is, replication--the same basic approach that's been used in many products. Some of the databases and Notes have used this. If we put great automatic replication into the file system, then you can have the work you do on your local machine be stored there and get that speed and flexibility. But whenever you connect up, it will be sent up to the server.

We've done a lot of work not just on this IntelliMirror piece, but we've come out with the Zero Administration Kit. We've worked with Gartner and picked some customers to really understand how they view all this. And now with our task-station approach, where you can really lock things down and make them simple, we actually, according to the latest Gartner research, can get better cost of ownership than even a dedicated device, a Network Computer, that could never be used to run PC applications. And people are starting to recognize there are devices where you only want to run one or two applications, and the way you want to manage those is different than the knowledge worker PC where you might want to run as many as nine or 10 applications, and those knowledge workers will need the local performance and portability.

And so thinking of that entire spectrum and making sure Windows can adopt to the case where you want to lock down totally but still let you, if the administrator decides, give people immense flexibility--that's been a real learning process as we've tackled this as a top priority.

Daryl Plummer: That brings us to the question, really, of NetPCs, Windows terminals and Network Computers. There seems to be a lot of confusion amongst a Gartner class that we talked to about when they would select a NetPC versus a Windows-based terminal, and how you differentiate those from Network Computers. Can you give us any insight into this area?

BILL GATES: Well this is another case where I think what Gartner said is right on the target. The cost of hardware is not really the big issue. Network Computers got headlines by saying, this is a $200 device, or a $300 device. But then people started to think about that--hey, it's got to have a screen. It would be nice to have a keyboard, maybe a mouse. And when you have enough processing power and memory to run a browser--and HTML is common to everything nowadays--you need, basically, a PC. And so you can't get something where the hardware cost is substantially less. In fact, if you do the design the way the NC talks about, you're going to need a much higher-speed network, you're never going to run when the network is down--Larry

Ellison found that out in a few demos he did recently--and you're going to have to buy very expensive servers. And these NCs are not compatible with each other. You know, the Sun NC requires the Sun server; the Oracle NC requires the Oracle NC server software. They've got different user interfaces.*And so it's back to the days when the hardware manufacturers were writing their own system software, and although they were pledging allegiance to certain standards, their whole goal was to get people locked in.* So we have a very clear message about the NC. The NC stands for Not Compatible. It means it won't run any PC application and that they don't work with each other.

Now what's the legitimate part of these headlines?*The legitimate part is that the PC industry, with Microsoft at the top of the list, wasn't paying enough attention to cost of ownership. And so I think it's been a great wake-up call for us to go back and invent IntelliMirror and get the Zero Admin kit out there and get the dialogue with customers going about that topic. Because it is very important to people that as they get the value out of the systems that the budgets for doing that not continue to go up.*

DIFFERENT SPEAKER: [NetPC and Windows-based terminals.] Position them in the Windows family. When would you use one versus the other?

BILL GATES: NetPC--the term actually talks about two things. The first is adding some features in that allow for automatic remote booting, that get rid of the ISA. The ISA bus is a bit of a problem, because you can't always automatically detect the hardware that's out there and go off and get the device driver. So you have to configure IRQs and things like that. So we're trying to get the ISA bus to go away. And that's not easy because people have a lot of cards and it's going to take some time. So in NetPC we were very rigid. We said no ISA bus. Most of the things in NetPC are actually being adopted across the board in all PC designs. NetPC itself is a low-end configuration that really seals things up and therefore ensures that the users aren't going to be playing with the hardware.

Compaq has now come out with their NetPC and HP, Dell, Unisys, Digital--all of them, before the end of this year, will have those NetPC offerings out there. So it's part of the PC family. For some users it's the right thing. For most users they'll still want the more powerful machines that are in that PC range.

The Windows-based Terminal is our lowest-end offering. There we're very up-front. We say, what's the trick? It's cheap, cheap hardware that never has to change. But the trick is you're running the application on the server. And actually Citrix pioneered this approach and we came up with a licensing agreement with them where we now do the server software for this approach. And there will be many people you can get very low cost Windows-based terminals from. If a user used a terminal historically--a 3270 or ASCII terminal--a Windows terminal will work great for them. If they use a PC, if they're a knowledge worker and run a lot of applications, because you end up loading the server down, it's probably not the best approach. And so it's simply in that spectrum of choices that we offer to people that want to make sure that if they develop along the Windows path, they'll be able to reach out to every kind of user they have.

Daryl Plummer: How about with Network Computers themselves? I mean, the networking computing buzz phrase has been around, certainly. And do you expect to be a leading supporter of Network Computer software along with NetPC and Windows terminal software?

BILL GATES: Well PCs--virtually 100 percent of them are connected up to

networks. And 90 percent of the software Microsoft's doing relate to networking. The profound impact of the PC is as a communications tool. We believe that, and people tend to underestimate the PC phenomenon. You know, a couple years ago, people were saying, yeah, maybe PCs are too expensive. Well, PC prices have come down quite a bit at the same time they've improved a lot. And I think even today, with 80 million PCs a year shipping, people don't understand what that means in terms of chip innovation, peripheral innovation, software innovation, all the things that are going to go into that.*The PC five years from now--you won't recognize it, because speech will have come into the interface, the screen will be a flat screen, the performance will be 20 times what it is today.* But it will still run the applications that people have today. The investments they're making now will still apply to that platform.

So we believe in PCs--that is, compatible devices--including reaching down to very low-cost hardware. Windows terminal is the only true thin client because you're not putting a browser, which is a very big piece of software and ever-changing, onto that client. You're simply putting the video protocol. So we span down to the lowest and we're pushing up more and more in terms of the highest end with clustering and symmetric multiprocessing as well.

DIFFERENT SPEAKER: You mentioned browsers. I know you want to tell us about the Internet Explorer and how it's doing in its competition with Navigator. Do you feel that the progress you've made thus far is satisfactory? Are you ready to say right now that the browser wars are over? Where does it stand?

BILL GATES: I wouldn't say that the browser wars are over. I mean, Netscape will keep innovating in browsers; we'll keep innovating in browsers. It's a heck of a deal for users. I mean, let's face it. You shouldn't be spending any money on browsers; they're free. We talked about IE 4 and we said, what should we price it at? And we thought, well, that old price is working pretty well, and so that's where we are.

DIFFERENT SPEAKER: No discounting?

BILL GATES: A hundred percent discount. The thing we brought in with Internet Explorer 4.0 is easier navigation, a channel-type interface where you can have people sign up and have information sent to their machine automatically, so even when they're offline, they can go down and browse that information. And we're starting to show how instead of teaching people concepts about browsing--favorites list, backwards, forwards--and then teaching them another set of concepts about their most recently used files and navigating around the network to find files, that if you bring those together, people only have to learn one naming model, one security model, one browsing model. Now that's not going to happen overnight. The shell isn't going to be totally the browser. But we've taken a big step with Internet Explorer 4.0, and we've gotten a good response.

The things to look at are people like Merrill Lynch or General Mills or Toyota and what they're doing to take their employees and present information by using the browser. Instead of your PC just being a set of file names on the screen, it becomes the information that those employees really care about. In the case of Merrill Lynch, that's stock prices--you know, monitoring portfolios, alerting that person to things they should care about. By bringing that right down onto the desktop, we're really starting to deliver on an old slogan that Microsoft had, which is Information At Your Fingertips.

Daryl Plummer: With your situation with browsers today, and certainly more

people are wanting more complexity from what they're doing, a little more robustness than HTML provides, can you give us any insight on which of the technologies you're working with will be significant for that robustness, such as DHTML versus HTML versus XML? Can you comment on that at all?

BILL GATES: Well I think the W3C, which manages the HTML standard, is to be congratulated for doing a fantastic job. As HTML has improved, they've been able to keep a very coherent standard and a very clear set of tests that manage that standard. They're now putting out the proposals for Dynamic HTML, and that will be in all the browsers. What it does is it lets you reformat the information while the user is looking at it without going back to the server. It's very slow when you have to go back up to the server. And so if all you want to do is see a little more detail--say you have a set of records; you want to resort some columns--you shouldn't have to go back up. And so that's a pretty substantial advance. The industry is putting a lot into HTML, and I would encourage people, particularly if they're looking at wide area presentations, to think of HTML as the center of what's going on.

The current work we're doing in Office is totally focused around HTML--making it very easy to read HTML and making it so that anybody with a browser will be able to look at Office documents. Now if they want to do rich editing, sure, they have to have Office. But if you just want to view it and page through it, you don't need any special code; you just take your browser, point it at that document, and there it is, and you can navigate around it.

DIFFERENT SPEAKER: Will HTML be the file format for Office in the future?

BILL GATES: We will support reading and writing HTML. Another lesson we have learned is that we can never move away from the existing file formats. And so we are not changing the file formats. Those will be the same.

DIFFERENT SPEAKER: You learned that lesson.

BILL GATES: That was the big lesson of Office 97. XML is coming into the mix here as quite important as well. Internet Explorer 4.0 is the first browser to have XML support. If you want to send structured data, XML is the best format, particularly if you want to take the same data and present it in different ways. You ship it down in XML and then you use just the presentation level, the HTML, to pick the parts of the information you want to display. And so Office is going to support XML. HTML is the presentation format and XML is the data format. So I think people really should pay attention to XML. It's early days for XML, but some of the leading companies that did a lot with SGML documents are now really moving in there. And I did a demonstration last week at a conference with Arbor Text where they show how they've taken their tools now and moved them to support XML.

Daryl Plummer: So you see them as complementary technologies moving into the future or becoming one?

BILL GATES: Unfortunately, HTML for presentation is going to be the standard, and XML for structured data is going to be the standard. So we really need both of those.

Daryl Plummer: Let me ask you a second--you've gotten a lot involved in different kinds of content, different media types and so forth -- "Infotainment," a combination of entertainment and information. And you've made some acquisitions--Web TV, some agreements with DreamWorks, or working with them. When do you think that kind of thing will pan out?

Because we haven't seen a lot of interest in the business community about this technology. When do you think it will pan out?

BILL GATES: Microsoft has four businesses: the Windows business, the Office business, the BackOffice business, and now these new interactive content businesses that we're getting into. The first two are over $5 billion, incredible businesses, lots of room for innovation. The BackOffice business is our fastest growing, and that's really where we're putting the most emphasis. And that, too, will certainly be as big or bigger than the first two.*It's really in this fourth area of interactive content that the business models are very unclear, and only because we take a long-term view and we're quite entrepreneurial and we're jumping in early to learn a lot about what kind of tools are necessary here and to try and create some fun sites on the Internet.* Our travel site, Expedia, actually is profitable. It's our only site that's profitable right now, and that's because there's a transaction fee there. The idea of customizing, remembering what somebody's done in the past, making that easy, showing them the specials--the interactive is so much better than any other way of dealing with that information, because it's very broad, very deep type information. And actually our greatest success is not so much our own site, but taking that technology and licensing it to the airlines and to the travel agency companies so they can use it in terms of what they want to do.

So there's been a re-emphasis on our part to take our software skill and use that as a primary thing and make that available more broadly, not just do our own branded sites. I'm a big believer in what I call the Web Lifestyle--that is that during the course of the day, you'll be using the Web four or five times just as a matter of course. If you want to plan something, you want to buy something, you want to coordinate something...that not just your work activity, but even your home activities, the Web will start to fit into that. Now it will take a decade for the majority of people to work that way, but getting the richness and scalability into Windows NT, getting the development tools to let people build these richer and richer Web sites, and even doing a few of them ourselves so that we're smart about it--that's really part of the progression that's going to get us there over the nest decade.

Daryl Plummer: Now when you say "the richness of NT," you bring me back to a question that is always on my mind and on the minds of a lot of clients. Windows 98 versus Windows NT 5: what advice can you give our clients on how they should decide between the two? Should they wait? How do they balance?

BILL GATES: I'd say my first point would be to people that when you buy machines, buy at least 32 megabytes of memory. Because even if you're not using that at first, that's a very good investment. It's a lot easier to have that there than to go back and put it in. And for very demanding users, you should even be looking at moving up to 48 or 64 megabytes of memory.

The second thing I would say is that the 32-bit platform is where all the new applications are being written. That includes Windows 95, Windows 98, all the versions of Windows NT. And so having a good migration path from the 16-bit system--there are still a lot of them out there in the installed base--to some form of the 32-bit platform, I'd say that's a top priority.

Then the third thing I'd say is if you're just coming up with your plan to move off that 16-bit platform, it probably makes sense to focus in on Windows NT. If you've got some systems that don't have enough memory or you want to get the speed up and the extra reliability that comes from Windows 98, it's a simple upgrade. It's not the same kind of big decision that moving to Windows NT is where you really have to go through your hardware standards and make

sure your application mix is going to fit on those. Windows 98 is like a DOS 5 type upgrade where yes, the machine runs better but it doesn't change the device driver structure; it doesn't do anything dramatic that would create instability or incompatibility there. It really is just packaging up speedups, some user interface tuning, and a lot of good ideas that we have come up with based on user input since we shipped Windows 95. And so it will be a good tune-up for a lot of people to go through, but it's not a strategic decision like 32-bit platform or making the migration to Windows NT on desktop and server.

DIFFERENT SPEAKER: Well on the server, you've made a lot of claims this year about Windows NT's server scalability and what one can do with Windows NT in a business environment and with SQL Server. And you did some demonstrations earlier this year of some very large configurations that look like you worked hard on the demonstration but aren't reflective of what really can happen in the real world today. Where is Windows NT right now and what do you expect it to be able to do next year? What kinds of customer problems can you solve?

BILL GATES: This is a glass that's 95 percent full. And with Moore's Law, it keeps getting fuller and fuller. That is, there are applications today that still run best on the mainframe. But look at mail performance. We used to have 300 or 400 users on a server; now we have over 2,000. Lots of customers doing that, working very well. Look at database performance. We've gone from 2,000 TPC-C to over 12,000 TPC-C, and there's no doubt we'll go to over 25,000 in the next year. So if you think of any applications somebody has, we're now covering the space of all but the most demanding applications. With clustering, for people who can use clustering, we'll tackle a lot of those as well.

And so we have all sorts of things on our side. We've got Intel's improvement in processors where they've been doing a great job. We have symmetric multiprocessing with more systems, where now you can buy eight processor systems on a regular basis, and that will move up to 16 and even 32. And you've got clustering that lets you, if you can partition things properly, go up to arbitrary scalability. That was what we used in the billion transactions a day demo we did in Scalability Day.

So we wouldn't say that all of the pieces are in place. We'd say every single one is being put in place, and people ought to look hard at what they can do here. Right now we need data center tools and storage management tools. But all of those things, even within the next 12 months, we will be in a very strong position.

DIFFERENT SPEAKER: And one of your great competitors in the enterprise software arena is Oracle. They've been doing a pretty good job on UNIX systems, and now on Windows NT systems as well, with respect to clustering and transaction processing and decision support systems. They still seem to be able to gain mindshare with respect to enterprise database capabilities. And your offering, SQL Server, is still often relegated as a departmental and workgroup server. How do you see it coming up to compete with the likes of Oracle or mainframe DB2? When and what are the key features that you need to be competitive?

BILL GATES: Microsoft decided to be a leader in the database field over three years ago, but it takes a lot of time. We started back then hiring the world's great database architects, people like Jim Gray and many others, and really taking the code base that we started with, which actually came from Sybase, and restructuring that to do record-level locking, to have a new query

optimizer. And we've come a long ways. SQL 6.5 is a great product that will handle most applications people want to do. Microsoft is run on SQL Server. All our applications, all the things we do--we're pretty pure about that, and it works great. There is a big milestone with SQL 7, which is now out in beta test and will be released some time next year. That moves up the scale of things we can do, the online backup, our performance on TPC-C, things like that.

And so you will see very healthy competition in the database area. No doubt Oracle's doing a fine job. Microsoft's also doing a fine job there, and year after year, we'll be a credible choice for even the toughest applications that people want to throw at us.

DIFFERENT SPEAKER: The area where Oracle is furthest ahead of you is in people in the field--consultants and knowledgeable salespeople in the database arena. Do you plan to close that gap at all or do you expect your partners to carry you there?

BILL GATES: Well we've been growing Microsoft Consulting very aggressively. And here in the United States, if you take out the people Oracle has on their vertical applications, we have as many consultants in the field as they do. And we're a bit different. Our consultants--the incentive we give them is to pass along the architectural skills. Not to sit and write code or try and have a big project. They're actually incented that if they can make the customer self-sufficient and move on to another project, then they've done a great job there. So we are building that up. We think that's important.

But I think when you think about Microsoft, you have to think about Microsoft plus the partners--Microsoft plus SAP and BAAN and PeopleSoft and those people. Because Oracle's chosen to attack those guys by being in the vertical applications business, you're not going to see a natural partnership between Oracle and those companies. We've chosen not to get into those businesses and let the guys who have that particular expertise continue to do that and integrate that in with the things that we happen to do very well.

DIFFERENT SPEAKER: Where do you draw the line as to what businesses you will get into and which ones you want to leave for your partners in the verticals? How do you determine when it's Microsoft territory?

BILL GATES: Well we think the businesses we're in--and I gave you those four--those are great businesses.*Teaching Windows to have vision; teaching it how to learn; teaching it how to share data across the worldwide network--that's plenty of challenge for us.* Making Office better and better, bringing the linguistics into that; making BackOffice take on these challenges. And the kind of skill we have in writing that software is different than the skill you bring to writing, say, manufacturing software or payroll software. So we've just said we're not going to do it; we're just going to be a partner with those people. Because it's not the kind of engineer that we hire or the tester we hire or the kind of volume standards that we've been very, very good at driving.

The only place there's some uncertainty is in that new interactive content area where everybody's experimenting and trying things out. The exact scope of what Microsoft does and how big those businesses are--it's going to take most of the next five years to really figure that out. But we're certainly not going into what you'd think of as the classic application space.

DIFFERENT SPEAKER: Well you've mentioned linguistics and heuristics a number of times. I get the impression that you're investing very heavily in those areas and that your research budget is directed there. Can you tell the audience, what is your research budget, where are you directing it, and what

is the most important technologies, you think, for the next five to 10 years that you're willing to invest in that are not ready yet?

BILL GATES: Our R&D budget's a little over $2 billion a year, and we've been growing that rapidly, as fast as we can bring in great new people. Financially, we can afford to go full bore in doing that. The part of it that's pure research ends up being about 15 or 20 percent of it. Actually, there's a pure, pure research where we have these mathematicians thinking about algorithmic things that who knows if they'll ever apply, but that is a tiny portion. Most of it now is focused on what we call the natural interface--the computer being able to listen and talk and recognize handwriting. And those areas, it's been disappointing how little progress there's been. The demos were great 10 years ago, but nobody got a good system put together.

We believe that that is changing now, and a standard part of Windows will be speech and linguistics. And if you want to really broaden out the Internet, make it so you can just pick up a phone and call in and ask for your mail or ask for a flight schedule, then it really will make it more a part of everyday life. So within five years, we see those natural technologies getting into Windows, and that comes out of our research group. We've already done some of that--bringing linguistic capability into Office--but it's just the beginning of what's possible there.

Daryl Plummer: Do you believe that you can be seen as a technological innovator through your research? Often the perception is that Microsoft is not a technological innovator. How do you feel about that perception, first, and do you believe that you can become the technological innovator of the next decade?

BILL GATES: Microsoft was the very first microcomputer software company, when nobody believed there could be such a thing. And we went to Intel and talked to them about what our vision was; we got in there early with eight-bit machines; we got IBM to use the right approach for there to be an open PC industry. And so from the beginning, we believed in the importance of software. We believed in hiring great software people and making long-term investments. Some of the things we're doing in research probably won't pay off for a decade. Some probably won't ever pay off at all. But our long-term approach has worked very well for us, whether it's building standards or doing software innovation. We bet the company on MS-DOS. We bet the company on graphical interface. We bet the company on Windows NT. Now we're betting the company on these natural interface technologies, that that will bring computing to the next level of pervasiveness. And we'll take those technologies and go out to partners, people doing applications, and let them write applications that take advantage of those things.

When you're in the position we are, which is the leading software company, within the industry it's very competitive; people are always taking shots at us. But when it comes to driving the open standards forward or driving our own products forward, we're very proud of what we've done. And the success sort of speaks for itself.*We get up every day and say, hey, let's make sure that this is not our peak.* Let's make sure we're driving forward and not missing anything that the customers are trying to tell us or anything that our labs or labs in universities are going to be able to come up with that might change the whole framework.

Daryl Plummer: Just a quick question. You have an issue of driving your own destiny, certainly; everyone would like to do that in standards. There's been some public discussion of disagreement between yourselves, Microsoft, and Sun Microsystems about licensing. As you look to drive your own destiny, how

much of a problem are issues like that for you, other companies with other options and other technologies inserting themselves into your world?

BILL GATES: Well we're always going to have technologies that we license. We want to move at full speed. We often go out and acquire companies and bring them into our development process. We get lots of input from the partners on what we're doing. So that's very critical. It's kind of interesting with Java--when Sun went and wrote a Windows clone, which was called WABI, they didn't have any license from us. They're welcome. Go ahead, do that. But when we did Java, we went to them; we signed a license; we paid a fee there. Because we thought, hey, if Java's got a role here, that's valuable. It is sort of illustrative of the contradictions of calling something an open standard when there's one company that controls the trademark and can define what it is. And we have no problem whether it's a standard or not a standard. We think there's some real value there. But we believe that things that are standard should be neutrally managed and things that are a company's products where that company is going to take the risks and get rewards, they should be clearly labeled that way. And you shouldn't have the ISO be used to create some intermediate thing that's not really an open standard; it's really kind of a product, and yet you're using the terminology as though it's something like an HTML or a TCP/IP that really have had everybody coming in to contribute to make them a lot better.

DIFFERENT SPEAKER: Bill, our hour has flown by. I want to thank you very much for coming and spending the time with us and our audience. Welcome back any time. We appreciate it. Thanks very much.

BILL GATES: Thank you.

Presentation Materials

Bill Gates: Word Doc.(97KB)