Washington Software Alliance Breakfast
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Remarks by Steve Ballmer

(Applause.)

STEVE BALLMER: Well, thanks very much to all of you, particularly thanks for getting together at such an early hour of the morning. I don't know about the rest of you, but normally I'm dropping my son at school right about now, so I had to get everything moving a little quicker.

Based on Mark's introduction, I wasn't sure whether I was supposed to get up here and just say, "customer, customer, customer, customer" 150 times before I got started, but I decided I might burn through our time too quickly.

What I'd like to do today is talk a little bit about in a way something I think is obvious to everyone in the room, but I want to make it explicit, some changes I think that have happened in the computer industry, I could say in the personal computer industry, but that sort of belies what I'm about to talk about, and some additional changes I think we ought to expect to see, and how that affects both opportunities and maybe challenges to some of the businesses we currently have.

Before I want to, before I do that, though, just really have a chanceI just want to say how great it is to be at this event. I occasionally get a chance to speak at events like this elsewhere. This week I was in Atlanta. Atlanta is the only other place I've ever been where there's a software group, software association that is anywhere near as active as the one here in town. We had about 1,200 people from a group meeting of their -- and I'll call it technology alliance, they let hardware guys in, I guess, as a consequence. But the level of activity -- the poor hardware guys in the audience were laughing. (Laughter.)

But as, you know, as I travel around, I don't think we can underestimate the level of interest and activities in the Seattle area. And it's a fantastic thing, it really is. If you scan the globe, and you say, "Where are people really trying, where is there an active, alive, vibrant community," and I'll put Silicon Valley in a category all of its own, good and bad, but after you get outside of Silicon Valley, there are just a few places. And, you know, really Seattle, Austin, Texas, Tel Aviv, those are the three communities I get a chance to be part of in one way or another, where there's a real active, vibrant, high technology group. And so when Mark suggested maybe coming out and speaking today, I was delighted to have that chance.

Let me go back and give a perspective, past, because I think past helps set up the change to future. When Bill Gates and Paul Allen

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started Microsoft, or at least shortly thereafter, they came up with this -- I don't know if the word vision is correctly stated, but aspiration, that we ought to all be working to put a computer on every desk and in every home. And in a way you could say missions or aspirations like these are -- some companies have them and people think they're invaluable. Some people -- come companies have them and people think they're silly beyond belief and unimportant and not guiding of actions, so why bother to have them?

What I've actually found over the course of years is this has been a very important kind of clarion call, not only for our own employees, but I think from time to time our partners and customers to some extent. It was all about the PC is it, and let's go make the PC an incredibly popular device.

This year around the world there will be over 100 million personal computers, 100 million personal computers. And that's happened largely as a result of, you know, the improvements in software, but particularly the kinds of improvement that Moore's Law has led to from a hardware perspective. And you can see the price per MIP, you can see the growth in PC shipments and it's just been an incredible thing. The rate and pace of innovation's been fantastic. People have used the additional power or -- sorry,and cost improvements that Moore's Law implies to do interesting things, to be smaller, to be cheaper, to be bigger, to be faster. And, you know, if we look out the next twenty years, we've got twenty more years coming with Moore's Law, where we're going to have 2 to the 12th -- about a year and a half for Moore's Law -- we'll have 2 to the 12th more power twenty years from now than we do today, and people will be able to package that up in more smaller devices, cheaper devices, higher end devices, whatever the market demands. But it's been just absolutely an incredible phenomenon.

About, oh I don't know, about a year ago, people started talking to me about how this computer on every desk and in every home thing, it wasn't right. It didn't really characterize a lot of what we were trying to do internally. It didn't really speak for a lot of the opportunities in the industry. And it was important for us to really think about what is the next 20 years going to look like, and to try to re-express the mission that our company is about, and I think to a large measure a lot of the other companies and participants in the industry.

How do you characterize the fundamental opportunity? Some people want to say, "It's just the Internet, stupid." And, you know, you get a chance to read on the cover of Business Week about one week it's the PC's dead, long live the new devices; the PC is dead, long live the Internet. And I'm afraid that maybe that's not -- we need a little bit more subtle view of the future. The answer's also not "the PC is it, and all these other things are unimportant.".

And so really having some kind of view of what the future looks like I think is absolutely essential, and then executing on it.

And so we -- we really started to think about how to express what we feel. I think if you go back to the PC, and think about what's the value

that we've all derived out of personal computers, it's been some sense of empowerment. It has let us do something that we wanted to do. And certainly the value that people will get out of the Internet and new devices, the PC, any of the above over the next twenty years is going to be fundamentally tied to a sense of empowerment. If we're not empowering people to do something new, not something cheaper, not just, you know, sort of just more efficiently, but empowering people to do something new, I don't think there's really much of an interesting business for us all to participate in.

So we talk about giving people and organizations -- A computer on every desk and in every home really spoke primarily to individuals -- the ability -- we're avoiding the word "power" I guess these days -- the ability or the power to do what they want where they want. And where is a critical notion. The world of a computer on every desk and every home implies everything gets done on the desktop device. Where you want, at the center of the network, great, execute at the center of the network, whether that's a corporate LAN or the center of the Internet. But if it's down on the desktop or down on the local device, that's fine, too.

One of the things we have a certain passion about internally is the television will actually be a fat client over time, we would argue, because for a lot of the most interesting video services of tomorrow, you actually are going to want to have some storage, some permanent storage, you're going to want to have memory, you're going to have a processor locally to do some of the most important things in the TV connected to the Internet scenario.

We might be right and we might be wrong, but the fact of the matter is whatever technical approaches -- that wasn't a good sign, maybe moving the mouse will help.

(Projector fails)

That was a really bad sign. I'll let somebody worry about that bad sign, while I continue to talk. (Laughter.)

It's clearly not a software problem. I've done some testing on that, and it's clearly not. There we go. I'm getting a little help here. (Aside.) It's okay. I mean, you want to do that? (Pause.) Well, if it was that simple, it would be a software problem. (Laughter.) OkayOkay, we don't really need the slides. No, it's okay. It may be better. Could we turn the lights up, though, as long as I'm not going to use the slides anyway. Okay. So let me continue on the theme, because I can do this without the slides. (Laughter.) Come on, it's our life, come on, I'm supposed to be able to do it without the slides. (Laughter.) It's actually tougher to do it with the slides; then you've got to make sure you're talking about what's up on the slide at the time and you move them along.

So the power to do what you want where you want, I mean it's an important thing, because different people are going to want to distribute processing capabilities in different applications in different ways. When you want, which I think really to this day and age talks to 7 days a week, 24 hours a day types of operations, so to do what you

want, where you want, when you want, on any device, on any device connected to the Internet.

So there are's two new concepts in that. Any device, not just PCs. It is a range of additional devices that I think will be important. And the notion of -- I should probably say connected to the "I-apostrophe-net" bu beingt connected via Internet protocols, whether it's on a corporate intranet or connected to the world of the Internet at large.

You could say is that terribly important? Well, I know internally to Microsoft that was a very important change for us to start talking about. We had people who were genetically conflicted by some of the things we're doing. (Laughter.) You know, is Windows CE a good idea? Well, it's not a good idea in a world where your mind gets locked into a computer on every desk and in every home. Is it a good idea or bad idea to build, you know, PC super servers? Well, not clear if the world is a computer on every desk and every home. Is it a good idea to have terminal services, so -- ooh, we're back, we're back and we're bad.

So in a variety of ways -- I may not go back to it, though, at this stage. I'm sort of off track. (Laughter.)

So in a variety of ways I think for our company, and I think and hope for a lot of other people in the industry, other participants and our partners, maybe that iscan be an important change in the way we think about things.

A first question some of you may ask is does that mean we're predicting that we're at the end of the PC era, as others do. And the answer to that question is absolutely not. The PC will remain a very important central device to the way computing happens, in our view, over the course of the next ten years. Now partly that's dependent upon us and others like us, but us primarily, cleaning up the PC's act. The PC has to be more predictable, more reliable, less prone to blow up. But the notion that the general-purpose computer will disappear and the only thing that will be left is some kind of funny appliance, I reject that notion. What I do accept is there will be new devices that spring up that all need to participate in the world together.

I ask you to do a thought exercise, an honest thought exercise right here. Think about your homes in seven years. Do you expect to have one, two or N personal computers? I expect to have N, where N is probably at least one for each of the kids, one for my wife and I only like the laptop anyway, so we have four PCs in the house.

How many TV-attached appliances do I expect to have? I hope only three. We have three TV's; I hope we don't have more by that time. I might like to have less. But let's say we have three TVs. Every one of those I hope will only have one device. I actually don't hope they have a set-top box and a video game machine. I'd probably guess that the device that's attached will be smart enough to be both a set-top box and the video game player.

I am quite sure that we'll have at least one or two what you might call very thin clients, just screens essentially, that sit in certain parts of the

house, where we just want to get access to some level of Internet information and don't need a PC, probably the kitchen being the place I guess I think of most of all. We wouldn't want to have the full device, but just something to bring up some information, maybe some e-mail occasionally.

I suspect our for telephones we'll have at least, you know, one or two, maybe three or four intelligent telephones in the house.

I don't know what's going to happen to stereo sets. I probably shouldn't call them stereos, that shows my age, but nonetheless I think we'll have some intelligence in some of the other electronics.

And these devices will be hooked together on some kind of a network. And what device is likely to allow be kind of the device that we use to kind of, I don't know, not control, but sort of have all these these things to talk to each other? Probably the general-purpose programmable device, probably the PC. That's my guess.

So I accept the notion of new devices. I just don't accept the idea that the PC goes away. And so while other things, other environments may grow up faster, the PC stays important.

Four or five years from now, do I expect there to be more than 100 million PCs sold? Yes. I chronically under-predicted the number of personal computers that would ever be sold. Andy Grove, about seven years ago, said to Bill and I, "100 million PCs by 2000." "Ha-ha-ha," we said. "No way will there be 100 million personal computers sold by the year 2000." Well, the actual answer is it didn't take that long. is the actual answer.

So I expect to continue to see growth in the PC market while we see the rise of some new devices, including PC superservers. I mean, we will have those six, seven years from now. I don't think anybody in the room would be confused about it. You know, from Microsoft's perspective, our goal has to try to be to continue to provide the software, the basic operating system software for these new device types, whether it's the server where Linux is certainly a big competitor, whether it's the TV-based device where MCI and Liberate are doing interesting things, whether it's the handheld device where Palm is doing interesting things, but the basic structure of the kind of devices and the way in which those get built up I feel pretty confident about. And so the question is how do you provide the software that really goes in that direction?

I might refer to this environment as the environment of, or the era of the PC-plus. Rather than the end of the PC era, I think we're at the beginning of the PC-plus era. And the PC-plus era will be a very exciting one. It will be one in which these new devices are important and, as I said, the connection to the Internet grows more and more important.

The definition of what software is will change, I think, quite dramatically over the period of time. Just a small show of hands, how many people here would say you build something that we might

consider classically packaged software or PC software? How many people would say there business is fundamentally building websites Web sites or Internet software? How many people aren't in the software business? (Laughter.)

Well, yes, I don't think there is an independent server-based model anymore, because of the Internet, but you're right, I asked the question in a bad way, so I sort of excluded server-based computing. I'll defer to the gentleman's question. How many people here build server-based software today, non-website? Well, that's good, I got a lot more hands. Thank you for the suggestion in my questioning; it's a good point. ?

I think the nature though of what software is in general changes fairly dramatically. I think the whole notion, whether you're serving the consumer market, the small business market or the large business market, what you see on the client will look far more -- oh, what shall I say -- it will be an integration of what we think of today as web Web pages and what we think of today as PC application software. And I don't think it will be an either/or. There will be some applications wheree maybe a flat HTML application will work. There may still be some applications, which are essentially largely client based. But as we even think of the future of Word and Excel and Microsoft Office, I think the whole way in which the client environment displays information changes. And you think about HTML, but you think about HTML with more rich controls in it. Even in the Internet environment, I think things will go that direction, and I think XML will be a key technology that sort of enables people to capture the best of both worlds.

I think that in the era of broadband it's also true that there will no longer be software packages that are not also services. I mean, I think about what's Windows lookwhat Windows will look like six, seven years from now. Windows isn't a bunch of bits that goes on a computer. Windows is maybe some bits that goes on a computer, but also a service that keeps those bits up to date, that helps refresh them, that helps provide new services to them. And we've started in what I might call some fairly feeble ways to do that through this thing we call Windows Update, but every software package will go through an evolution. And I'm not sure you'll call them pure services, nor will you call them pure software packages.

And a lot of people like to run around and say, "What's the business model? Oh, my God, life's going to change." I'm not even sure that that's the fundamental thing to focus in on. People come up with business models that work. Whether you happen to get paid every month a certain amount of money or whether you get paid some money up front plus a certain amount every month, all of those questions I think are open and people will find appropriate models to make money.

But the notion, the very character of what the software is, that will absolutely change. When you can count on somebody's PC being always on because everybody's at the end of a broadband connection, when you can count on the fact that you can get anything out there for reasonable speeds, you know, the world changes.

Some parts of the market grow very quickly. The small business market I think rises up. Right now the small business market is very underdeveloped for personal computers, IT in general. And I think the small business market rose up dramatically, because it's exactly the software services that I think the small business market very much needs.

Then there's the The consumer market, question, what's happened with the consumer software market in this country over the last several years? It's been quite flat, if you just think of standard, traditional packaged software sold through stores. I mean, it grows 10 percent, 6 percent, but actually the rate of growth has dramatically lagged the rate of growth in hardware sales; dramatically lagged. It's been counter to what we predicted six, seven, eight, ten years ago. We always thought that you'd actually see more software consumption than you did increases in PC consumption. And what's happened is people put their time and money and attention into connecting to the Internet, and, you know, the $250 a year that you spend to connect to the Internet is a lot of money relative to consumer software. That $250 implies a lot of time that you spend online that you don't spend buying consumer software.

But I don't think the answer is again we'll be totally pure. We'll see a mix in a little bit different kind of experience, once you have a broadband connection, because when you have a broadband connection and you can have software that's self-managing, now you can throw bits down on the guy's hard disk. Everything today assumes there are's no bits except the browser on the guy's hard disk or the person's hard disk. That's a false model for the future. It's a false model for the broadband world. It's a false model for a world in which we eliminate DLL conflicts. I mean, it's just a false model, because you'll want to get the best really of both worlds.

When I think about this -- and I'll just talk from products we build, because I understand them the best -- I think about some of the kinds of things we're trying to do with Microsoft Money, where you get a fairly rich client experience, well-integrated with an Internet service. I think about some of the things we announced this week with Office, where you have a rich set of client bits, but you author documents that can be hosted out in the network, so you get collaboration and communication out in the network. But the broadband infrastructure is always on and because you can have client bits again just changes what we think about and define as software, I think fairly dramatically.

Let me talk a little bit about some of the new device types that I think are going to be important, and we just brought four or five -- most people here have probably seen them -- small laptops. This is one of those Windows CE, what you'd call Jupiter machines. This is from Vadem,(Vetam ?), pretty interesting machine if you haven't seen it. Here's one of the new color -- one of the new color Win CE devices. This one's from Casio. It's got the music player built in -- or the media player build built into it. Here's another one from HP. This is a device we have nothing to do with, that I carry personally, and I'm excited about, therefore I want us to build software that fits into these, and even if we don't, I want to make sure our server software integrates

well. This is the Blackberry device, which has been a life-changer for my secretary and wife, who now know how to get me, since I won't carry a cell phone. It's a very convenient device.

But I think we're going to see a range of these kinds of mobile devices, and you're going to expect at some point to have a device that essentially lets your office and life move with you and still have an always-present reasonably broadband connection.

Now, people today think about wireless as largely narrow band -- at least many people do -- and I say we're a lot more optimistic today than we were three or four years ago about having reasonably broadband wireless connections in the, you know, next four or five years. I'd say we were fairly -- well, we were fairly pessimistic about that, and we've grown to be fairly optimistic about that with the work that a number of companies are doing in that area.

But literally I think these devices will explode in adoption, without replacing PCs. I'd carry one of these to take notes, to check in, to do a lot of things, but I don't think I'd ever try to manage my PowerPoint presentation on this device. I wouldn't really want to read long e-mail on this kind of device. And this one's still a little too big and still a little too clunky and Palm's doing some good work. This one does have color, which is nice. And there will be really, I think, quite a great competition. But I think this will be an explosive category, and I believe even these devices will be reasonably general purpose; that is you'll write software that has a piece that can run here, a piece that maybe runs in the server, maybe all of the stuff you provide initially run on the server. But we have a strong interest and I think the market should have a strong interest in doing services for this kind of mobile device.

Let me talk about the other, what I think will be mainstream new device types, and that is the TV-attached device. And the TV-attached device needs to do a lot of things potentially. What does TV viewing in the future look like? I mean, when I'm done with this, it will explain a little bit why maybe we invested in a company like AT&T and some of these other cable companies. TV viewing will be quite different. You'll be watching your television and you'll want to say to your buddy a mile away, "Hey, did you see that great home run Griffey just hit?" That will be an instant message. And at some point you'll probably just yell it at your TV, but at some -- and, you know, whether your friend's watching TV or whether they're out with their wireless device or whether they're on their PC, that will become an instant message that you can communicate to people. So the notion of communications will be important.

I don't really think people are going to sit there in their family room doing e-mail, you know, kind of as a family y, I mean, in the classic sense. Yes, for certain kinds of photo albums and videoconferences, but I do see a change in the nature of communications.

We have some data on this from our WebTV experience. We've got about 850,000 subscribers. And what i's the number one reason today people churn out of the WebTV service? They bought a PC. It's the

number one reason people stop using their WebTV, because it's not -- the thing that people want isn't Internet on TV. It will be a changed TV experience. The way content is produced will change. There will be webWeb-enhanced content that will be important. Video gaming and set-top boxes, it's hard to know, but I don't think it will happen in the near future, because there's just too much momentum on both sides, but over time it's not clear to me that those markets don't drift together.

And, you know, I think that's the nature of Sony's comment when they see the Plays Station as a competitor to things we're doing with Windows. I don't think of them as competitive, but somehow there will be a migration, because I just don't think it will make sense to families over time to have all of that expense. And both sides of the coin from the business perspective will want the other guy's revenue. Sony's going to put an intelligent box in and subsidize it. They're going to want to get the gaming revenue, as well as some online revenue. If the cable company puts a box in and subsidizes it, they're going to need gaming revenue in addition to other revenue.

The advertising business will change fairly dramatically, because now you can do direct -- instead of doing broadcast advertising, you can do much more narrow band advertising, as we do on the Internet. That may require some intelligence.

The nature of the services and utilities, which you get with your TV, will change. You've seen some of the things maybe that Replay TV has done and (Tevo ?) and we've done in this box that we're distributing with EchoStar called the WebStar that lets you go get a sandwich and have your TV just record what happens to your hard disk. And you kind of watch the world in a five minute delay, but you don't miss anything.

So the TV viewing experience will change and there will be a new set of content opportunities that open up in that kind of environment.

I want to just end with a little bit of a discussion of what we're up to, what our role is. We're going to continue to focus on doing the key enabling software, and a few key applications. And we do the key applications both to make money -- that's a good thing to do -- but also if you don't yourself do the key applications, you don't feel the pain that the rest of the software development community feels. And one of the things I know is true today, I think we've got a great server software story. I think we have a great set of development tools. And I think our product line would be even better if we had a client server application that we built ourselves. Then people would feel the pain of client servers. Old style speak, but application with server and client components that we built. (Around ?) client server implies troglodyte, and Internet-based apparently is unclear. So all I'll say is a three-tiered application. It would behoove us to feel the pain that many of you, based upon the show of hands, feels every day.

So we focus in on the enabling software, a few key applications and partnerships with the right people. Why did we make an investment in AT&T? Because the only way in which we're going to get our TV platform adopted is to have the right partnerships with the people who

provide video services. And the cable TV people certainly look like incumbents in terms of having that opportunity. And if you look at the other investments we make, they all have that kind of characteristic.

Do I think we have to invest in every partner? No, far from it. But to do some of this leading edge work, to guarantee that we get trials, we're willing to put money up. , because in In some sensses the scarce resource in a company (is not capital today, it definitely is people ?). . I know for most companies it's both, but in our company the absolute scarcest resource we have is great people. And as hard as we hire and as many people as we bring in and as tough as it makes the labor market for all of us in the Seattle area, that remains all of our scare resource. And so we're trying to figure out clever ways to use resources whichresources, which are less scarce, to help form partnerships that can bootstrap some of these markets. So that sort of gives you a perspective on what we're focused in on and why.

We've got at this stage five major operations to focus on. Cconsumer Windows, focus on IT professionals including our Windows NT product, on developers where we're building sort of our next generation three tier architecture including Sequel SQL Server and the development tools and the application server, focus on knowledge workers -- knowledge workers still represent 60 percent of all PC purchasing is done for knowledge workers, not as dedicated controllers, not as consumer machines, but knowledge workers, people trying to enhance their ability to get their jobs done.

We have a focus in on also what I call the area of consumer and e-commerce. It turns out platforms for e-commerce are nice, but most people who do e-commerce want more than a platform, they want you to help with customers. And so we've done a lot of investment around what I'd call electronic commerce marketplaces, places where not only do we have technologies, but we bring together buyers and sellers and other participants. Carpoint'sCarPoint's a good case. We bring together the car manufacturers with car buyers, with the dealers in kind of a virtual marketplace. We've done something recently in the same way in the health care market where we invested in this new company, which is a merger of WebMD and (Healtheion ?), and they want to bring together doctors and patients and hospitals and pharmaceutical companies and insurance companies in kind of a virtual marketplace. And I think that will be an explosive area, particularly in the broadband world, because in the broadband world all of the small businesses and consumers that need to tie into these virtual marketplaces can do that on a pretty good basis.

So with that, let me kind of wrap up. I know we're going to have the chance for question and answer, and Mark says discussion. Mark's going to come up and kind of host that. But I really appreciate your time this morning. And I apologize I had to shut off the projector. Thank you.

(Applause.)

MARK: No questions, hmm? Oh, we do have someone.

Q: Steve, your last point, great segue. Can you tell me a little about viruses and Microsoft's attention toward them, especially in the e-mail front?

STEVE BALLMER: Yeah, we've done a lot of work in Office 2000 to help fight viruses. And I'm not sure we'll solve all problems that everybody wants us to solve, but Office 2000 provides a number of safeguards which are being set forward, so let me just mention a couple of them. The first is in Office 2000 essentially you can set it up by default that, you know, macros don't get run, they just do not get run. And that would be, what shall I say, certainly an advantageous thing for a company to be able to implement.

The second thing we do in Office 2000, which really means the Outlook mail client as much as anything, is we do give you the ability to only run macros from people you trust; that is, you get applications or files which are signed and if, you know, the file really is from one of 100 people who I trust, then I'll go ahead and run that macro and not worry about it.

So you get sort of two additional levels of control over what kinds of things get processed that you might receive through the electronic mail system.

It's not everything we need to do. There are some more plans, which we'll attack in the next release of Office. But for a company that wants to sort of properly implement Office 2000 with a focus in on virus protection, we've given some fairly strong tools for the administrator.

MARK: Anybody else?

Q: Hi, Steve. My question is can you talk a bit more about the Partner Solutions Center which is so focused on the Telco ISV and Cableco's and how that's going to affect the distribution model of the future with resellers and (vars ?),VARs. and how you feel those kind of guys, I guess, are going to go away a little bit? And also then, can you tell us when Windows 2000 Data Server --

STEVE BALLMER: Well, I'm less pessimistic about the impact broadband will have on the channels than many people are over the next several years. If you think most of what VARvars are about is reselling things and maybe they are for some of us and not for others, but if they're really about reselling, they'll go away. I know our VARvars are primarily about adding value through services. Most of our VARvars think that what they do for a living is bill for $100 an hour and if they have to sell some software or hardware to do that, they will, but their basic business is providing value added services. You know, most of the VARvars drive up Northeast 24th Street in Bellevue and you get just a bunch of VARvars that happen to be on that strip of road. Most of those guys, you know, make all of their money on the billing that they do, and that's how they think about themselves. So I'm not so worried about, quote, "the channel" as long as the channel's continuing to add value.

Retail is a little different story. In the retail case I do think over time most software will be physically delivered electronically and so retailers may be less involved in the sale of software ten years from now than they are today. But nobody should rush to that, because, you know, broadband isn't here. I mean, I talked a lot about everything except how present is it. I mean, what do we have, several hundred thousand cable modem subscribers and maybe 100,000 or so DSL subscribers in the whole country?

So the degree to which anybody should think they're just going to trust on physical delivery of classic software I think would be wrong minded to assume those dealers go away over the, you know, certainly next four or five years.

MARK: Anybody else? In the corner with the mike there.

Q: As you consider these mobile devices you have on this table, what do you consider reasonably broadband wireless and whom do you consider the leading companies that will deploy the infrastructures that don't exist today?

STEVE BALLMER: Yeah, well, I think you can start to talk about reasonably broadband when you start to get up to, you know, a few -- at least ISDN type speeds or beyond, as opposed to very slow modem rates. And I think what will really happen is any wireless -- all wireless providers will have a great opportunity to move in that direction, because the core technologies will be really technologies that come from the Telco equipment manufacturers, well, from Erickson, from Nokia, from Qualcomm, from Lucent, from whomever. And, you know, folks like Sprint and others will all have an opportunity to move in that direction.

There are people who are, you know, better positioned from a spectrum perspective, but the key is for the technology, the guys who do R&D in radio wave to get moving. And certainly we talk with particularly the guys at Qualcomm, where we've gotten to know the guys pretty well and (Irwin Jacobs ?), who runs the company and he's a technologist, and we talk to the guys at Teledesic. I mean, there's a lot of reason to be a lot more optimistic today than -- these guys were actually a lot more optimistic yesterday too, but they started to even convince kind of old troglodytes like Bill and I on this topic.

(Laughter.)

Q: Can you talk a little bit about how the ease of distribution of digital media is going to play into what you are planning on?

STEVE BALLMER: I'm sorry, just say again?

Q: The ease of distribution for digital media, rich media, and what you're doing?

STEVE BALLMER: Yeah, I think the notion, when you can assume

broadband infrastructure, the notion of the way in which you think about applications, it just changes. I was with some folks yesterday from the University of Texas. One of the missions the university has is the university is to help provide support and sort of classes, if I could say it that way, through the K-12 institutions in the state of Texas. And they were reminding me how big ol' Texas is and how rural Texas is. And, you know, basically it drives you fairly quickly to the notion that distance learning is fundamental, as an example. And how are you going to do distance learning? And, you know, it draws you very quickly to sort of broadband media technology, because I don't think we can count on, you know, 10th graders to study calculus with flat old HTML. I don't think that's a whole lot better than going to the library and not studying calculus.

(Laughter.)

So it is -- you know, it's my strong belief that the streaming media technologies and the notion of digital media broadband will be very important.

The thing I think is exciting is we're coming to a conclusion that even with kind of low-speed DSL connections, you can get a reasonable digital media experience, because of the improvements that we and others are making in compression. You'll actually at even, you know, sort of 300, 400 certainly KBD be able to deliver a fairly reasonable experience, and that's pretty important, because that means not only cable, but even light weight DSL starts to play in the digital media space.

In the back.

Q: Yes, can you comment on what three tier applications Microsoft is considering developing?

(Laughter.)

STEVE BALLMER: Sure. Well, there certainly -- the primary ones we're building today are all in the -- inter spaced with things you'd associate with our MSN technology base today, and we're putting our heads down and doing more and more in that area. We don't have any plans outside that area today. I guess we reserve the right to be smarter, but we are doing more in that area and thinking about it more formally as a way to gain experience with our three tier platform, particularly if you take a look, say, I'll point to CarpointCarPoint again. CarpointCarPoint, we've spun out an additional module in CarpointCarPoint that we call Dealerpoint and Dealerpoint is actually a set of tools that help the dealer manage the leads that they receive, manage their used car inventory, et cetera, and that application and applications like that, that are kind of peripheral around some of our MSN properties start to have a much more three tier character to them.

Q: You mentioned Linux as a potential competitor on the server side. There have been several stories recently about (Symbion ?) as a looming competitor on the (cell phone ?) side. Do you have any

comment about that?

STEVE BALLMER: Both are true. (Laughter.) Both present great competition. You know, I think -- I pointed to this form factor, but certainly an interesting form factor will be the -- you know, the telephone, the screen as opposed to you can consider these screens with telephones and we'll have telephones with screens. And Symbion, you know, is an interesting company with interesting parents and might do some interesting work.

We are a company that, you know, has no position in that market today, so I would say it's kind of wide open and their parentage gives them, you know, quite a reason to exist.

So, we hope to do the job, but I know there will be strong competition in the market.

Is (Herell ?) here? Okay. Yeah. (Herell -- (inaudible) -- actually runs our efforts competing with Symbion. He's standing in the back of the room. If you want to ask him further, please feel free to check in.

In terms of Linux, you know, Linux is a competitor. It's a very good competitor, and we take it very seriously, particularly in the server market. I've got to admit I don't see it yet very visibly in the commercial stage, but the fact that it's so present in the academic world makes it a very potent competitor. And unlike other units, this one actually runs on the right hardware. I mean, it sounds dumb, but, you know, guys like Sun always missed the boat. They can't beat us if they don't ride on the PC platform, because the volume economics are on the side of the PC platform. And I don't know why nobody figured that out, but Linux is -- and SCO did a little bit, but Linux is the first sort of unit that always thought about itself as PC-based and as trying to be kind of -- and has gotten to a critical -- some kind of critical mass of share. So we see it as a serious competitor. We have people focused in on it in that way. Even though there's no company to go, you know, focus in on, we see Linux clearly as a competitor.

Q: Now, my question is around the investments you're talking about. Are you more excited putting billions into AT&T or acquiring like a Jump.com or even a Hotmail?

STEVE BALLMER: That would imply that we think about investments as investments, which we don't. We want to have a strategy to offer communication services on the Internet. Sometimes you build, sometimes you buy and we bought, of course, both Hotmail and Jump. But sometimes you build, sometimes you buy. And then completely separately we're offering a TV platform. And what's the best way to popularize that? Mmm, might make sense to invest in AT&T. Totally separate thought. If we were more capital constrained, I guess you'd go to the capital appropriation's committee, and they'd have to think about it in a more formal way. That's what we do with headcount, there's a headcount appropriation's committee, "ooh-la-la, where are we going to put, you know, the new hires out of college this year. Oh, my God, we can only get N and we need 2N. What should we do?" Then you have to make that kind of sort of formal trade-off.

But your question sort of implies that we have to prefer one to the other and, you know, until we get capital constrained we don't think about it that way. We're just letting people run their business, and if they need to apply capital to do so, they do so.

MARK: Other questions? Okay. Well, thank you very much, Steve.

STEVE BALLMER: Thanks very much.

(Applause.)

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