The Free State Foundation

A Free Market Think Tank For Maryland...Because Ideas Matter

Broadband Nation: Where Does the U.S. Really Stand in the World Rankings?

Congressional Meeting Room North
Capitol Visitor Center
Washington, D.C. 20081
June 5, 2009

Transcript of the Proceedings

PARTICIPANTS:

ROBERT D. ATKINSON, President, ITIF

DAVID A. GROSS, Partner, Wiley Rein LLP

CHRISTOPHER GUTTMAN-MCCABE, Vice President, CTIA

LINK HOEWING, Assistant Vice President, Verizon

RANDOLPH J. MAY, President, The Free State Foundation

P R O C E E D I N G S*

MR. MAY: I am Randy May, President of the Free State Foundation. Welcome to this event. It is really good to see you all.

As many of you know, the Free State Foundation has done quite a few events on the Hill but this is the first one in this new Capitol Visitor Center. I wanted to hold this seminar here to see whether it also rained on this side of the Capitol.

(Laughter.)

MR. MAY: And it does. I was telling someone just a few minutes ago that for two of the last three Hill events that we have held, it has actually poured like cats and dogs, as we used to say. The next time we have a drought, I think I will just schedule another event.

(Laughter.)

MR. MAY: The title of today's program is *"Broadband Nation: Where Does the U.S. Really Stand in the World Rankings?"*

I am sure everyone here knows that broadband is at the top of the communications policy agenda this year. President Obama has placed a great deal of emphasis on it. We have $7.2 billion in stimulus funds devoted to broadband that

* This transcript has been edited for purposes of correcting obvious syntax, grammar, and punctuation errors, and eliminating redundancy. None of the meaning was changed in doing so. The editing assistance of FSF Research Assistant Tristan Hardy is gratefully acknowledged.

are tagged to be distributed by the NTIA and the Agriculture Department.

And, of course, the FCC is charged with developing a national broadband plan to be delivered to Congress early next year. Not entirely by coincidence with respect to the timing of this program, initial comments responding to the FCC's notice of inquiry soliciting comment on the National Broadband Plan are due to be filed on Monday.

So I think the program today is well timed. It is also very important in a fundamental sense because it obviously makes a difference to policymakers fashioning a broadband plan to have a good sense of the country's progress in making broadband as ubiquitously available as possible and in achieving widespread usage.

In other words, it makes a difference whether one views the glass as half empty or half full, or nearly full or nearly empty.

And as part of that consideration, it is certainly not irrelevant to understand how the United States is doing in relation to other countries in the world as well.

Now before introducing our presenters, and not wanting to pre-empt any of them, I just want to say this: for too long, in my view, we have had some people in this country that I would call the "talking broadband down crowd." And they

have pretty steadfastly minimized or refused to recognize the progress that we've made in broadband over the last several years or indeed over the last decade.

I wrote a piece in April of 2007, a little more than two years ago, called, guess what, "The Talking Broadband Down Crowd."

(Laughter.)

MR. MAY: Here is how I began that piece: "The predictable laments from those who cite the latest OECD broadband penetration statistics are getting tiresome." I apologize for my bluntness at that time.

(Laughter.)

MR. MAY: "Quite simply, those here in the United States who continue to talk down this country's broadband achievements clearly have a policy agenda in mind. That agenda is to impose net neutrality, read common carrier regulation, on broadband providers."

I know that is not true of everyone, and I do not want to over-generalize. But in my view there has been an element that has tended to minimize what I think is pretty remarkable progress.

Significant policy implications flow from the answer to the question, "Where does the U.S. really stand?" The answer depends both on having accurate information, reliable data, and

also being able to understand and interpret the data in a reasonable, common-sense way.

Fortunately, we have a group of experts here today who know an awful lot about the data and who have a lot of common sense. I am going to introduce all of the speakers at once. I am going to do this alphabetically and then I am going to have the speakers speak in another order. You have bios so I am just going to give you some of their highlights.

Our first speaker is Ambassador David Gross. As many of you know, David is now a partner with the law firm of Wiley Rein, and most importantly he recently completed his eight-year reign --

(Laughter.)

MR. MAY: Rather, his eight years of service. I was not absolutely sure of the protocol when I asked him to be on this program. I asked him if I should refer to him as "*Former* Ambassador David Gross" or as "Ambassador David Gross?" He informed me right off the bat, in no uncertain terms, that once you're an ambassador, you're an ambassador for life. He actually said his wife insisted upon that as well.

(Laughter.)

MR. MAY: David was U.S. Coordinator for International Communication Information Policy at the State

Department. He was appointed by President Bush and confirmed unanimously by the Senate.

He is now one of the world's foremost experts on international communications policy. He has led more U.S. delegations to major international telecommunications conferences than anyone in modern history.

At the end of David's bio, he says he had practiced law for 14 years. One thing he does not say in his bio that we were actually partners.

MR. GROSS: I still remember that --

(Laughter.)

MR. MAY: It is just an omission in his bio. I had the pleasure of being David's law partner for a number of years at the law firm of Sutherland Asbill & Brennan, so I can testify first-hand that he is an awfully intelligent and creative lawyer.

I can also testify firsthand that he had a large world map in his office at the time and he used to stick pins in all of these places around the world that he had visited. There were an awful lot of pins there and this was before he became an ambassador. I guess he was destined to get that position and do all that traveling.

Rob Atkinson is Founder and President of the technology policy think tank, the Information Technology and

Innovation Foundation, and a non-resident Senior Fellow at the Brookings Institution.

He is a doctor, so I should say Dr. Atkinson at least once. He is also an author, a technology policy advisor, and an international speaker on innovation policy. He previously served as vice president of the Progressive Policy Institute.

Christopher Guttman-McCabe is Vice President of Regulatory Affairs at CTIA. He joined CTIA in 2001 and has worked on a wide range of issues involving Spectrum Regulatory Mandates and Homeland Security.

Previously he worked at the law firm of -- guess where? WileyRein.

And last, but not least, is Link Hoewing. Link is Assistant Vice President of Internet and Technology issues for Verizon. Link is responsible for developing relationships within the industry, identifying and assessing emerging issues, and developing corporate positions on Internet and Technology Industry issues.

Link served eight years as a Congressional legislative aide and Deputy Staff Director of the Senate Government Affairs Committee.

Now with those introductions, we are going to jump right in. David is going to lead off and I have asked him to speak up to 13 or 14 minutes as the lead-off speaker. The other

panelists will follow him and keep their remarks in the seven-minute range. If we follow that plan, we should have time for some interaction and questions. David?

MR. GROSS: Thank you very much Randy. It is a pleasure to be here. I am impressed that so many friends are in the audience who came out in the rain and were able to find this place.

Well, let me begin by stating the obvious. We should look and, even more importantly, understand what is happening with regard to broadband internationally. However, it is also very important, and fairly obvious, to recognize that all countries are different. As we understand very well in the United States, most countries have very different broadband deployment environments, even within their borders.

We have always looked carefully at how other countries handle broadband deployment. That has been at the core of the U.S. government's work bilaterally and multilaterally at organizations such as the ITU, APEC, CTEL, and even at the OECD.

Almost everyone agrees that the OECD's broadband statistics are useful and certainly interesting. However, virtually everyone agrees that they are deeply, deeply flawed.

There are many reasons for these flaws. To the OECD's great credit, they are being addressed but we will have to wait and see if these flaws can be properly redressed.

For example, the OECD still uses per-capita statistics when most broadband today is shared and wireless broadband connections are, as a practical matter, virtually ignored in the statistics. The result is that the OECD statistics fail to account for many types of users, especially those who are unusually common in the United States, such as those in college dorms, where wireless and wireline broadband facilities are shared, and the government and private companies, where broadband is virtually available at every desk.

Similarly, the OECD still classifies broadband as any connection that transmits at a rate of 256 Kb/s. Of course, many others, including the FCC, still use this rate but it is clearly out of date at this time.

For me, the most fundamental flaw in the OECD rankings is that they imply that, like baseball, the winners are ranked higher and the losers are ranked lower. Perhaps most disturbingly, the OECD rankings also imply that it is a zero-sum game.

As a result, they don't focus on where the U.S. is clearly number one in the world, such as the total number of users. At about 80 million, the United States has more

broadband users than the next three OECD countries combined: Japan, Germany, and France. But I still do not think that that is a particularly important number. We all know that the value of telecommunications, especially broadband and the Internet, is not based upon one country having more than another.

This is not a zero-sum game. We all benefit from the network externalities created by having more broadband users. The more people in the world who have broadband and access to the Internet, the better it is for all who already have it.

So it is not as important that any one country reaches a certain broadband ranking but rather that everyone has access, or has the opportunity to have access, so that, globally, we all see a growing pie. We should celebrate that growth and not seek to retard it by suggesting that others profit at our expense.

During my time as the U.S. Ambassador, I, together with colleagues from what was a terrific inter-agency team composed of people from the State Department, the FCC, the Department of Commerce, and others, worked hard to change the perception that the United States need always to be viewed as number one at the expense of the rest of the world.

I do not understand why those who called most loudly for the United States to be more humble in its international dealings seemed to shout the loudest that we must

somehow stop other countries from doing well in the OECD rankings.

Instead, we should continue to focus on what we believe is best to promote broadband deployment and adoption regarding the unique circumstances of the United States, independent of whether it moves us up the artificial OECD rankings.

Those who seek to use the OECD's statistics to argue for greater United States government action regarding broadband should remember that the OECD has spoken very clearly, and issued a formal recommendation, explicitly endorsing a focus on effective competition and continued liberalization in infrastructure, network service and applications, as well as policies that encourage investment in new technological infrastructure. Perhaps most importantly, the OECD has explicitly recognized the primary role of the private sector in the expansion of coverage and the use of broadband with complementary government initiatives that take care not to distort the market. This is what OECD recommends and this is the path that we in the United States have not only taken, but led globally.

What is important is not just the number of broadband connections deployed, or even the speed at which they operate, but rather what people do with that broadband,

and what governments do with that broadband, and what companies do with that broadband.

It is the more fundamental benefits, such as new and innovative services, increased economic efficiencies and productivity, and therefore increased living standards, that come from the provision and access to new and different information that is available through broadband.

It is important to remember, particularly as we remember the events of thirty years ago in Tiananmen Square and the Chinese government's most recent action, in which it has sought to restrict the use of wireless and wireline technologies and information flow in China this week, that it is the free flow of information and the access to information that is at the core of the power of both the Internet and broadband.

It is not just the number of connections, but the access and what flows across those wires and the wireless communications that is really important.

One of the biggest cheerleaders of using the OECD's broadband statistics is Derek Turner, who has written a number of pieces in which he attempts to respond to the critics of the OECD broadband methodology. In so doing, he seems to rely a lot on some proprietary information. Most importantly, he relies on ITU statistics, saying that he believes the ITU is the world's

most authoritative source of international telecommunications data.

So, let us take a quick look at the ITU. Just recently the ITU issued a major report called "Measuring the Information Society at ICT Develop Index 2009". That report notes, among many other things, that the lowest relative broadband prices are available in the United States. That same conclusion, more or less, was recently reached by the World Economic Forum and its Global Information Technology Report, which ranked the United States third for lowest cost of broadband.

Now I point out that statistic not to imply that the United States is the best, in part because I think there is continued room for improvement as most would recognize with regard to issues of price, but that the United States is doing better than virtually everybody else in the statistics that Turner talks about as being important.

As he has said, the real problem in the United States is not infrastructure but rather competition. His view is that broadband prices are too high. The numbers that I have seen by the ITU and by the World Economic Forum, and by others, demonstrate that is demonstrably not correct.

Similarly, the EU recently looked at the issue of state support for broadband networks and, importantly, the critical role of facilities-based competition as compared to the non-

facilities-based broadband resellers type of competition favored by critics such as Turner. The EU concluded, and I thought correctly so, that when in a given geographic zone at least two broadband network providers are present and broadband services are provided under competitive conditions, meaning facilities-based competition, there is no market failure.

"Two in a market, no market failure," is their view. They went on to say that "accordingly, there is very little scope for state intervention to bring further benefits."

"On the contrary," it said, "state support for the funding of the construction of an additional broadband network will in principle lead to an unacceptable distortion of competition and the crowding out of private investors."

Now let me just end where I began. It is critically important that we look and learn what we can from what is happening internationally. That is what we have been doing for many years and I am sure that the new Administration will continue to do that.

During the nearly eight years that I had the honor of leading the United States government's international telecommunications efforts, our interagency teams worked tirelessly to learn about and to bring home global best practices regarding all aspects of telecommunications, including broadband. The results of those efforts, including those from the

private sector that both worked with the U.S. government and worked independently, can be seen by the remarkable progress that is made in the United States regarding broadband, and many other areas. There is no doubt in anyone's mind, especially those in the international community, that the United States continues to lead, both regarding the Internet and broadband.

During the previous administration, we went from having less than 7 million broadband connections in the United States, to having, according to the FCC, more than half of all U.S. homes and businesses actually subscribing to broadband services.

In fact, the Copps Commission recently highlighted that, during the past administration, broadband has not only grown but has become "an integral and critical part of American life."

This is a remarkable accomplishment in an extraordinarily brief period of time. I hope and expect that the Obama Administration will continue the great progress that the prior administration already has made to bring broadband to all Americans.

Thank you very much.

(Applause.)

MR. MAY: David, thank you very much for getting us off to such a good start.

Now we are going to proceed in the following order, with Link Hoewing, then Rob Atkinson, and then Chris.

While Link is getting set up, I just want to remind you to please think of questions that you might have as we go along.

Link?

MR. HOEWING: Thank you. I myself have a title, David, that I can add to my regular Verizon title. I'm a commissioner. I was elected to the Town of Poolesville as a commissioner. This is my second term. I came out on the coattails of Barack Obama.

(Laughter.)

MR. HOEWING: The difference is that I lose my title if I lose the next election, which I hope doesn't happen, but who knows?

I wanted to do two quick things today. David covered the ground quite well in looking internationally at the statistics on broadband penetration and deployment. But I want to spend a minute on that and add a couple of additional points that might be useful to you in terms of background.

Then, I would like to spend more time looking at the industry from a financial investment, competition, and

technological standpoint. Most of the time at my job is essentially spent analyzing reports of the industry from this perspective and I want to show you some statistics and trends which I think are very important. Are we going in the right direction? Are we getting consumer value? Are consumers getting something out of these markets and the policies that we've developed to actually encourage competition and platforms that we have today in broadband?

As David said, the policy that we have in the U.S. is not to rely on unbundling and shared networks, but to rely more on the investment in networks. I think they have provided a lot of value and I want to show that to you.

So first, I took a couple of slides -- and I want to give credit to Chris Bowman of our Verizon staff -- looking at the statistics in terms of global penetration in another way. We have done two things here.

First, we have broken down the state-by-state penetration of broadband by homes, but not by number of lines per hundred population. That is what the OECD does. This looks at it on the number of connections per home and it breaks it down by state. I think that is fair on two counts. The European Union is a confederation of states and we have states with a lot of different topographies and markets as well.

Comparing them that way is fair. If you look at the red line, representing the number connections we have on average in the U.S., it is at 50.9 percent. You can see how many states in the U.S. are above the EU average, which is at 35.4 percent. Looking at that metric, many states in the U.S. are doing quite well.

We have some states that obviously are lagging behind. You can see that in the bottom towards the right hand side. But by and large, it is a pretty good record. Again, comparing to other countries, many of the states in the U.S. are doing pretty well.

The OECD and the FCC both use the number of broadband connections per hundred population. If you use that metric, looking at the telephone industry in the U.S., where about 95 percent of the population is connected with telephones today, we are only at 49 percent. Obviously, that does not tell you a lot. It is a snapshot. There is some value in comparing countries but it is not the be-all or end-all in how these markets are working.

My question is: Do we have problems in the broadband market? If we do have problems, what are they?

I want to focus on a couple of challenges. The first challenge is a lack of adoption. We have broadband that is deployed widely in the United States and a lot of people still

have not signed up for it. Secondly, we have a deployment problem in some areas, largely rural areas.

Looking at the first issue: What value is the industry providing in terms of investment and its effect on competition and the development of new technologies? If you look at some of these factors, it gives you a sense of how competitive the market really is.

Companies do not just invest because they like to build new technologies. They invest because of customer demand for new technologies and to get a competitive advantage in the marketplace. That level of investment was huge over the last five years. Over that time, the industry has invested three hundred billion dollars in new technologies. The amount of competition in both the wireless sector and in the broadband sector is tremendous and the speeds we are delivering continue to get faster.

Now clearly there are some parts of the country that do not have access to fiber to the home networks, which Verizon is deploying. And they don't have access to 50 Mb/s connections. But increasingly those are becoming a fact of life in more and more parts of the country. Whenever we deploy a new FIOS network, I can tell you that in many cases, the cable company will react pretty quickly. You will see a 50 Mb/s connection often offered in competition to what we are offering.

We are seeing the benefits of this competition policy in broadband platforms work.

As a company that is successful in the broadband marketplace, Verizon still has to sell voice telephone service, broadband service, and television service. Those are all being offered in that same broadband connection. And in every one of those metrics, we are not by any stretch of the imagination the only player and we do not command the whole market.

It just gives you a flavor for the kind of competition we are facing. How many people actually take our services in the marketplace? These people have options and if you look on the right, you can see there that a lot of times that they choose us, but also a lot of times that they choose other players. That is the nature of competitive market.

The truth is that every quarter we are actually losing lines as an industry to VOIP substitution offered by cable competitors and to wireless substitution. Again, this is evidence of competition.

So is the consumer getting value from this competition? Providers are investing and new technology is being deployed, with faster speeds and more choices. These are evidence of a market that is actually providing a lot of value.

This graph shows the investment levels going up over the last several years and how it compares it to the interstate

highway system and to the Apollo Space program on an annual basis. Again, this gives you some flavor of how much the industry is actually putting back into new technologies, centered to maintaining the existing networks.

There are at least four 3G networks in the United States today that are wireless and a fifth that is being built by Clearwire. There are also competing landline networks. So you have several broadband networks out there that are investing lots of money.

David referred to this already, but the uptake of this technology is incredibly rapid. This, on the left hand, shows how many U.S. residential broadband subscribers there are today, and you can see a huge recent increase. On the right you can see that there are a lot of different kinds of technologies that are offering broadband services, with television also a part of that mix.

This is a chart that shows you the line loss and the upper chart there, the blue on the top, is how many cable VOIP subscribers there are on a quarterly basis. Again, the reason that the companies are losing lines is in part because of substitution. Cable companies are selling services that wireless companies are selling. We would obviously love to try to prevent as much of that as we can, so we invest in new technology like

fiber-to-the-home and try to make sure we keep a connection to the consumer wherever we can.

Price drops are further evidence of this competition creating value for the consumer. "Entry level DSL" in 2001 cost $50 for a standard DSL line, which was usually only 768 Kb/s in those days. Today, as you see down the right-hand side, you not only have 50 Mb/s available, the price is nearly the same at $51 for a 50 Mb/s connection.

This is a speed chart that I put together charting my own Internet speeds over the years. I have been on the Internet since the '80s. I had a LISTSERV. I went back and looked at the modems I used, and the speeds I was getting, all the way back to 1988.

Starting in 2001, you can see how the speeds have increased. The speed of broadband available in the United States has actually doubled every 20 months. Now, that progress is less linear and more of a step-state kind of a process, but we are seeing increasing speeds on a regular basis.

This is a chart of the market share. 29 percent of people have broadband from telephone companies. The blue there is cable. The lighter blue on the top is a mix of dial-up and other kinds of technologies, including fiber. The 21 percent represents people that don't have broadband today. Many of those people have it accessible. Only about 8 to 10 percent of

the population does not have access to broadband at all. But these people just have not signed up for it.

To me, one of the bigger challenges is broadband adoption. How do we convince people to sign up for broadband connections?

To conclude, the U.S. has a broadband model that is successful and is achieving many key metrics. We are seeing progress on a number of fronts that provide value to the consumer in additional choices and cheaper prices, as well as better speeds and new technologies. The U.S. policies relying on platform competition have worked pretty well. They have spurred a lot of investment and they are certainly spurring choice. We do have challenges and they are largely around, as I said, deployment in rural areas and adoption.

To us, one of the areas that can be helpful here is the stimulus legislation. We have certainly been working with the NTIA. We offered comments. We are certainly very aware of that stimulus legislation. I think it could be very helpful in terms of expanding broadband into rural areas.

But we also think that the demand-side part of it is very helpful. The Heath IT piece and electronic medical records, which we think is a critical part of improving health care, could obviously increase the use of broadband.

We also think that smart grids are critical and both our Verizon Business Unit and our wireless unit are working on that.

Finally, we think some effort could be put into helping to promote the deployment of middle-mile technology. Middle miles essentially take the local traffic from the local networks up to the backbone. There are parts of the country where there is not even middle-mile technology. With more middle mile facilities, the cost of broadband in local areas could be even lower. So we have actually proposed some potential changes to USF funding, for example, that might help support middle-mile deployment. We think that would help a lot to get more broadband deployment.

In a nutshell, that is what is happening from my standpoint. I believe that the market is working. I think that we are getting good results. And I think that it is benefiting consumers tremendously. On balance, the United States is performing quite well. I know that Chris is a technology guru, but I thought I'd boot this up for him, just in case, because he has some slides too.

Thank you very much for your attention.

(Applause.)

MR. MAY: Next we are going to hear from Rob Atkinson.

MR. ATKINSON: Thanks a lot, Randy. It is a pleasure to be here, and it is great to follow Ambassador Gross and Commissioner Hoewing, who I will now call that for the rest of my life.

(Laughter.)

MR. ATKINSON: I am going to be, in my typical sense, a radical moderate, and say that there is some truth on both sides of this argument.

There is a report that we released at ITIF last year called "Explaining International Broadband Leadership." It went through a case study of nine countries, looked at all the data in depth, and tried to make sense of it.

If you wanted me to argue either side of this case, I probably could. And the reason I can argue either side is because this is a complex issue and in some ways we are behind, depending upon what countries you compare us to. According to the OECD, we were 4th, but now we are 15th, where we have somewhat stabilized.

As we pointed out in our report, the accurate measure, I think as Link and Ambassador Gross have said, is really the household. Koreans and Americans have bigger households and the Swedes have smaller households. When you look at broadband connections on a per-household basis, the

U.S. is not 15th, but 12th. I really do think household penetration is the most accurate measure.

On the other hand, one of the reasons you see is that there is a wide diversity of progress within Europe, and you have some countries that are quite small, like Sweden, who do quite well, and other countries like Italy, that do not do well at all.

If you compare just the EU-15 to the United States, on a combined metric of broadband adoption as well as speed and quality, according to the Oxford Internet Institute study, the U.S. actually leads the EU-15. We released those results in a report in March called "The Atlantic Century," which is on our website.

So, yes, we are behind some European countries, but we are ahead of a lot of others. And overall, we lead the EU slightly. We are clearly ahead in the use of fiber for high-speed connections, whether they are cable or fiber telephony. While we lag behind Korea and Japan, which I will talk about in a second, we have more fiber deployment and high-speed connections than Europe.

The other thing I would add is that if you fiber or high-speed connections are being deployed, particularly in Europe but to some extent in Asia, primarily only in urban areas. For example, in France, fiber is principally found in Paris

and a couple of other big cities that are in the core. The U.S. is really the only country that is deploying high-speed networks on a suburban basis, which is much more expensive and problematic to do.

There are a couple of other little factors that I think are interesting in this debate. There is another OECD report, and this was buried deep and I think I was the only one that ever got to page 419 --

(Laughter.)

MR. ATKINSON: But on page 419, the report had data on the number of broadband-connected classrooms, which the U.S. is the world leader on, which I think we ought to be taking credit for. That was a direct result of the E-Rate program.

There is another piece that we sometimes miss. We did a little informal study looking at the three poorest census tracts in Baltimore and Washington, D.C. We did a random sample of about 10-20 homes per census tract. We then tried to see what percentage of those homes could get broadband by going on line to the providers. We found that 100 percent of those homes could get broadband and around 90 percent could get two or more providers of cable, DSL, or a similar technology. The California Broadband studies suggest similar results.

I would argue that we could be doing better than we are but why is that the case?

Partly, it is because of demographics. We conducted a study where we looked at computer ownership data, which is a little bit sparse. We were able to find data describing PC ownership for 21 out of the 30 OECD nations on PC ownership. Of those 21 countries we were 10th on broadband and 11th on PC ownership. If the United States had the same PC ownership as the average of the top five countries in PC ownership, and assuming the same relationship between PC ownership and broadband, we would be 5th in the OECD.

So, in other words, I think a lot of the American problem is not deployment, but rather there are just a lot of people in the U.S. that do not have PCs. I think that is a big challenge that demands a big policy change. That is why we have called for a Lifeline Link-up program in the stimulus.

The second issue to look at is geographic. There are some people who have argued that geography has nothing to do with it. Other people argue that geography is destiny. It is clearly something in between.

We conducted a survey of the 13 out the 30 OECD nations that provided data on average loop length, which is not a lot. Lo and behold, the U.S. has the longest loop lengths of any of the nations we looked at. The Canadians had the second

longest. It is just simply more expensive to deploy broadband when you have longer loop lengths. In Korea and Japan, they have very short loop lengths.

I visited a company once in Sweden called Bredbandsbolaget or B2 as their shorthand because I had been told by a bunch of broadband advocates that they were deploying fiber all over the place. I spoke to their chief technology officer in Stockholm who told me that they do not deploy broadband to anybody unless it is a dwelling unit of eight units or more. Deploying to a unit with less dwellings did not make any economic sense.

You have to put the data in context. You can supply a lot of broadband in Stockholm, because it is all building units of 10, 20, or 30.

So what does that all mean? I think that this issue has incited so much passion and heat because it really shapes the policies that we ultimately choose to follow. I would argue that there are really three policy positions that argue from this debate.

One is that we are doing fine and we do not really need to do anything. I would argue that this is perhaps not the correct position. Unfortunately, the other position that stems out of this worries about our 15th place ranking and concludes that we should radically reshape our whole regulatory approach. This

approach would include regulating network neutrality, which I have never been able to figure out for the life of me what this has to do with the ranking.It seems to me that it is totally 100 percent divorced from rank. You can argue net neutrality one way or the other but it is just completely irrelevant to this debate.

Other issues, though, are not. There are still relevant questions related to whether we adopt unbundling or whether we adopt the Australia model, which is -- if they ever do it -- government building a network.

I think the major lesson we learned from this study was that countries are so unique in where they are, what their history is, and what kind of networks they have. It might make sense for Australia to build its own network, because the current incumbent has not really done very much. They do not have two kinds of pipes. They do not really have cable. And their DSL network is pretty bad. So maybe in that case it makes sense. In the French case, where there's no cable, it makes sense to do unbundling. But in other cases, like Korea, for example, it does not make sense to do unbundling where they have inter-mobile competition. You have to look at each country uniquely.

My last point is that the top three countries -– Sweden, Korea, and Japan -- are in the lead because they followed a third policy, which was neither sort-of abdication, nor

regulation, but was rather support. That really characterizes those three countries' policies.

While some of us think our stimulus was big, I think it was quite modest. The Swedes, for example, invested $30 billion in rural broadband stimulus eight years ago. That is why they have fewer than 30,000 homes without wired connectivity in Sweden.

The Koreans have the world's most sophisticated demand-side policies of any country. They have thought this through in a sophisticated way. They have subsidies. If you are a low-income family and your kid is doing okay in school, then you get a free computer. If you are a housewife or an unemployed worker, you can get special training programs. They have thought through the whole demand side digital divide better than any country in the world, and that is why they have the highest adoption rates of any country in the world.

Lastly, one of the main reasons that Japan has 80 percent fiber to the home, with the goal to have 90 percent by the end of 2010, is because it gave fairly large tax incentives to NTT to deploy. It decided that tax incentives would provide more encouragement to deploy than requiring unbundling. If people have not seen the new Japanese stimulus that just came out two months ago, it is a very impressive package. The Japanese stimulus gives a billion dollars to get broadband to

100 percent of the country, $100 million to get 3G to every place in the country, another $100 billion to do digital government, and another $100 billion to do a sort of community technology effort. They are quite serious about supporting this.

I think that is really the direction that we are going to go in and I hope that we will continue to go in, rather than the "Do-nothing or regulate" approach.

Thank you

(Applause.)

MR. MAY: Rob, thank you very much. I have always appreciated Rob's radical moderation, as I told him when I invited him to the program.

And I appreciate Rob for another reason. While reading that OECD report that he referred to, I actually got to page 400 and then put it down --

(Laughter.)

MR. MAY: And then, thank God, Rob got to page 419. He is that type of person.

MR. HOEWING: I do not think that you read the footnotes, though.

(Laughter.)

MR. MAY: Chris?

MR. GUTTMAN-MCCABE: Thank you for the invitation, Randy. Following the theme, I was thinking about my title --

(Laughter.)

MR. GUTTMAN-MCCABE: I am not an ambassador. I am not a director. I am not a doctor. I am not a commissioner.

This morning as I got ready for work, I was running around the house and stirring up my two young daughters. Then, I took off to work and left the mess behind with my wife. She looked at me and called me an --

I probably should not share that with you, but I think that is the closest title I have.

(Laughter.)

MR. GUTTMAN-MCCABE: Or at least it is the title that I will retain when I get back home tonight.

(Laughter.)

MR. GUTTMAN-MCCABE: One of the benefits of going last is that you get to listen to the other presentations and sort of think thoughtfully through them. I think Randy put me here because of a paper we put together and filed at the FCC a couple weeks back, which detailed the U.S. position with regard to the world in a number of areas.

While these first two slides reflect a voice environment, I think it is illustrative of where the U.S. is in the

wireless space. I think it is important for a point that I am going to make in a minute. This was designed to address some of the OECD ranking information that was out there and to address some of the policy issues that I and the wireless industry were dealing with.

If you look at the price per minute of these 26 OECD countries, we were not in the middle of the pack and we were not towards the end. We had the lowest price per minute. For those of you that even have just a slight bit of economic knowledge, you will understand that, accordingly, we have the highest minutes of use.

And the United States does not have the highest minutes of the OECD countries by just a little bit. The next closest country is just north of half of us. If you look at the other countries that the U.S. is often compared to in the OECD broadband rankings –- Korea, Japan, Switzerland, and others -- the difference in the minutes of use is staggering.

So again, this data is illustrative to show what competition is doing in the U.S. on the voice side.

I will now get to why I think that everyone should be optimistic. You heard Link, you heard Randy, you heard Rob, and you heard David. They talked about penetration, but they used words like households, houses, residences, computers, and things like that. That notion and that way that we measure right

now has been overtaken by events. What we are missing is the overlaying wireless and wireless broadband penetration.

Link mentioned that you can have the opportunity to subscribe to broadband and still might not choose to do so. When people look at this phenomenon, they are thinking of household penetration and the number of households passed by either cable or fiber or others.

(Phone in the Audience Rings.)

MR. GUTTMAN-MCCABE: By the way, I don't have any problems with cell phones ringing during my presentation. In fact turn them on and turn them up.

(Laughter.)

MR. GUTTMAN-MCCABE: But if you begin to overlay wireless on top, you start to get a different picture. If you add this wireless overly to the OECD rankings, you are going to see the U.S. on the way to the top.

In ten years we have gone from 3 million to 73 million broadband subscribers. These numbers are from the FCC and comScore, two entities that are independent from one another and track these statistics. But I think that they are missing the fact that there are a large number of wireless subscribers in the United States who have broadband-capable devices and who have the ability to use broadband on an as-needed basis. They have not captured this, yet I would argue

that you should not discount someone who uses wireless broadband to the extent that they want to use it.

There are a couple of other statistics that I think are important to detail. Subscriber counts for high speed lines have doubled between the last time the FCC looked at them in '06 and '07. Advanced service lines have tripled. And since 2005, in each of the FCC's reports, the number of mobile wireless providers have been the fastest growing contributors of broadband, even though those reports are lagging.

So CTIA decided to take a different look and see what else we could measure in regards to broadband. We looked at broadband-capable devices or advanced services-capable devices and found that at the end of '08, 88 percent of the devices used by our 270 million customers are broadband-capable. Some of those may be captured by the OECD's measurements and some may not be.

I would argue that the areas where broadband traditionally does not reach are often places where wireless broadband is the most affordable option. If this is true, you would see those numbers added to the data collected by the OECD.

Going back for a second, I love what has happened to the wireless device. I was going to bring a large phone, which I have brought a number of times when I have testified in front of

Congress. But it is always difficult to get it through security because they tell you to turn it on and I have to explain that I cannot because I do not have a car-sized battery with me.

What we see here is the evolution of the device. In my mind, this is what broadband is meant to do. You have your phone and your camcorder in one device. Your computer at home cannot also be your camcorder. It cannot be your pager. It cannot be your camera. It cannot be your wallet. You cannot take it with you and use it at a store.

The newest application that I have downloaded is a UPC code that takes all of the Harris Teeter, Safeway, and CVS programs that I belong to and puts them all on my wireless device. I just go into the store and touch my wireless device to the scanner.

All of these things to me signify the broadband experience. As we looked further at the industry, we saw that U.S. consumers have access to 620 different handsets. They have 33 different companies manufacturing devices into the market.

This competition and the evolution of the device that has taken place make me comfortable that the wireless experience and wireless broadband are really going to continue to of push the envelope. Policymakers, both in the U.S. and

around the world, are going to be forced to reconsider what is meant by broadband penetration and broadband rankings.

If you look in the upper left, you see "old wireless," which is wireless of 10 to 12 years ago. You can see that the chart has moved both down and across. So you have moved down through AMPS, IDEN, and TDMA, which made up the earlier types of services. Obviously, IDEN, to some extent, still exists.

But GSM and CDMA are the two different platforms that the wireless carriers employ right now, along again with IDEN. We have seen a progression across the chart to GPRS, EDGE, WCDMA, and HSDPA. We are in the HSDPA and EVDO REV A area and moving beyond that.

At the same time that carriers are considering moving to the right, they are also announcing plans to move down to the purple at the bottom, which is WiMAX and LTE.

If you look at any of the announcements around the world on both WiMAX and LTE, you would be pretty comfortable that we are going to lead the world in the deployment of those two technologies. Clearwire is already pushing WiMAX. Link's folks at Verizon wireless have already announced deployment plans of LTE that are well in advance of most of the world.

When you see the speeds that could be possible, even though some are theoretical because it is still an evolving technology, they are pretty amazing.

Not surprisingly, you are seeing almost a symbiotic relationship between device expansion and application development. When we did a similar study about 18 months ago, we had no section on applications, because there was no such thing as an applications store. There are now about nine of them that have been announced. There are 60,000 applications can be downloaded to wireless devices.

Just in the last 18 months, the market has seen the launch of Apple's iPhone, LG's Voyager, Samsung's Instinct, Google's G1, and BlackBerry announced and launched four different phones. We also have the Palm Pre being released this weekend.

Every one of those devices launched in the United States. They did not launch in Korea. They did not launch in Japan. They did not launch in the UK or in the EU. The evolution of evolution of the market, networks, and handsets in the United States tends to paint a picture that is different than the simple OECD broadband rankings.

Another reason why I am comfortable that this is going to continue is that if you do a simple search -- I say

simple, not because it would be simple for me, but because one of my interns was able to do it, so I imagine that it is --

(Laughter.)

MR. GUTTMAN-MCCABE: The number of CMRS-based patents continues to increase. So, in addition to all the innovation that you are seeing in the applications side, you are also seeing the request for patents continuing to climb year after year.

I would like to talk about the one thing that I would say that causes me just a slight bit of concern going forward. This gets to Rob's point about other countries facilitating or providing an environment for continued growth.

This is a difficult chart to read and I apologize. These are the top ten OECD countries by GDP. I already put up the price per minute but the staggering number is when you take the number of subscribers and you divide it by the line right below the black line, which is the MHz. You get the number of subscribers served per MHz.

The U.S. obviously does a great job in terms of its efficient use of spectrum. That 409.5 MHz number that I put up there is the most aggressive number that I could. That includes AWS spectrum, which arguably is only partly in play. It includes 700 MHz spectrum, which hopefully will be in play on the 12th

and we will not see another delay. It also includes 55 MHz of the spectrum that Clearwire is using at 2.5GHz.

So our worst-case scenario, or best case scenario, depending on upon how you look at it, puts us at around 409 MHz. We use that 409 MHz to serve 270 million subscribers that each use 829 minutes per month.

When you look at these other countries -- and we're still filling in the bottom, which is why it says "draft document" -- all of these countries have hundreds of MHz. We just found out that Japan has 165 MHz in the pipeline. If you count very aggressively, the U.S. has 40 MHz in the pipeline.

The concern is that we need to do more to facilitate further broadband expansion. I do think that broadband to the home is being rapidly overtaken by broadband to the person and I think that if you overlay broadband to the person and people taking it and using it, you are going to see a number that is pretty staggering in the U.S. And I think that that absolutely needs to be included in the calculation when going forward.

Seventy-two percent of Americans live in 7 percent of the U.S. geography. Getting to the other 28 percent will be an effort and wireless will help dramatically to get us there. More money will help this effort, but it makes sense to begin to factor in what wireless means to consumers. I do not think of it as a substitute. I think it is an alternative. Consumers make the

decision to go wireless based on the mobility and the robustness of the product.

As we get to the fourth generation, you're going to see an even greater take-off. You are going to see this happening around the world but I believe that the U.S. will be leading the charge in that space.

Thank you.

(Applause.)

MR. MAY: Thank you to all of our panelists. I thought those were terrific presentations by each one of you and I am sure they stimulated some thoughts or questions on your part, which we are going to make sure we get to.

I am going to ask each panelist a question. This is going to be a deferred question for a moment, but I am going to tell you what it is, so that you can think about it. I mentioned that the comments regarding the national broadband plan are due over at the FCC on Monday. A lot of people in this room are probably going to be filing comments, so I would like each of the panelists to very succinctly tell us your top two points for the FCC's broadband plan. Then I will probably just attach those and make them my comments.

(Laughter.)

MR. MAY: Perhaps not. But they will be helpful to use, I am sure.

First, I want to just start off with a question. David mentioned that the EU recently issued a declaration within the past week or so that stated that if two facilities-based providers operated in the same area, there would be no need for state support.

I had read a little blurb about that myself and I found it a bit surprising but heartening, because sometimes you think of the EU as being more interested in state support and regulatory intervention. I could see myself citing that report in those aforementioned comments.

Here is my question. David, were you surprised by the EU's declaration? Then, I would like to hear from Rob, not whether he was so much surprised, but rather whether he agrees with the EU's sentiment.

The Free Press, as many of you know, issued a paper a few weeks ago entitled "Dismantling Digital Deregulation." I read a couple of pieces deconstructing this article to try and rebut it. You could sum it up by saying that it is really a call for imposition of traditional strict common carrier regulation on all broadband providers. But throughout that paper, over and over again there are references to the fact that we have a duopoly in a lot of places. As Chris' presentation pointed out, we often have wireless providers as well. In my mind, we have even more competition than a duopoly in a lot of places.

Ambassador?

MR. GROSS: I was not surprised by the EU's conclusion. I think people have often misunderstood the differences between the EU approach and the approach that we have taken in the United States on many of these issues as being somehow a more basic philosophical difference.

My conversations with Commissioner Viviane Reding, Director-General Fabio Colasanti, and others in the European Union is that actually our differences are not really in that area. I am going to paint with too broad a brush here, because each of the EU countries is different, but basically in many of their countries they lacked facilities-based competition. Their interest in trying to jump-start competition either through resale or through occasional state support is due to a different set of circumstances than what we have in the United States, where we have had the great luxury of having much more facilities-based competition, particularly in the area of broadband.

This came up in a bid in the context of the EU's proposal to subsidize rural connectivity by about 1 billion euros. That continues, not too surprisingly, to be a struggle in Europe as it is here in the United States and elsewhere.

But Scott Cleland has blogged and written on this EU piece quite extensively and quite well. So, no, I did not find the EU piece to be that big of a surprise at all.

MR. MAY: Thank you. Rob, you mentioned during your presentation how mandated unbundling might affect the OECD rankings. We have all talked about the many flaws in the rankings. But again, that Free Press paper sticks out in my mind and running through it was the notion of requiring the unbundling. I would like to hear your reaction to that paper in your remarks.

MR. ATKINSON: Yes. Again, I think the problem with the debate is that, often, we will look at the methods used by the top ranked countries and apply them without considering the U.S.'s unique circumstances.

I completely agree with Ambassador Gross. Europeans have moved onto bundling because they want competition and they were not able to get it in an intermodal way.

In our study, we calculated an HHI, a Herfindahl-Hirschman Index. We discovered that the U.S. and Korea were the most competitive markets in the world. You had countries like France and Germany that were very, very uncompetitive in the sense of the number of providers due to unbelievably inept regulation of their cable industry. They never really pushed for cable competition the way we did in the U.S., so they did not get cable modem service.

It would be a mistake to look at these countries as models for the regulatory approach here. They are just simply in different situations than we are.

And my last point would be that even if you look at Japan, people will often talk about SoftBank and the unbundling requirement imposed on NTT's copper. I do think that the unbundling of NTT's copper did spur competition, because NTT was somewhat lazy and it allowed SoftBank to enter and pick up the slack.

They did not have any cable, by the way. It was all NTT. But what Japan did that is interesting is that they decided to encourage competition over the copper but not in what you would call a DSL cul-de-sac. Frankly, this is the direction Europe seems to be heading if they do not change their policies.

They decided that intervention into the DSL cul-de-sac, forcing unbundling there, would prevent Japan from jumping to the next level. So what they did instead was to essentially twist NTT's arm while giving them a bunch of money. They allowed NTT to deploy fiber but required it to be unbundled. And now they have 80 percent fiber deployment in Japan.

By the way, now another company, KDDI, an electric utility company, is also deploying fiber in the big cities.

MR. GROSS: I also think Toyko Electric is.

MR. ATKINSON: So, unbundling may work in certain countries at certain times, but the challenge now is not about getting a lot of people on the network. The challenge there is computer ownership and a faster network. I just do not think you can get there with unbundling.

MR. MAY: David, you look like you want to add and then Link, if you other two want to add something afterwards, you can as well.

MR. GROSS: I would just like to support Rob with one other example. Not telling tales out of school, but it's a European example. In the UK, one of the great struggles, which is currently being addressed in the upcoming digital Britain report, is how to give incentives to move away from DSL and other traditional technologies and into fiber.

The problem that they are finding is that the unbundling which has worked well for a certain level of competition, including some price competition, has not on average been providing proper incentives to progress. If you are happy with the status quo of a facility, then unbundling seems to work okay to give the illusion of competition. However, if your view is that you would like new investments and new facilities, it does not work particularly well.

MR. MAY: Again, the Free Press report asserted that we had 6,000 ISP competitors in this country due to the

unbundling of DSL. In my view, you can call these resellers "competitors" but they really were not adding much value. The services being provided were what we used to call "plain vanilla services." So you can have that type of competition if you require unbundling and manage it but they are not the facilities-based competition that I think we ultimately want.

MR. ATKINSON: Frankly, at the end of the day, I do not really care who my ISP is. I care what my pipe is. So I am sorry, Link, but I do not ever go to the Verizon home page. I use my own. I just think your ISP is irrelevant.

MR. HOEWING: That is why I advertised --

(Laughter.)

MR. ATKINSON: Exactly. It's the pipe, stupid. And once you are on the pipe, then the competition is the other stuff out there and the competition on the pipe. That is what matters.

I do not think ISP competition matters. It is how the bits get to you that matters and then what you do with those bits. The stuff in the middle does not matter.

MR. MAY: I agree. Chris, then Link.

MR. GUTTMAN-MCCABE: I was just going to pile on. I think that we are all violently in agreement, to some extent. First of all, we do not have to talk about unbundling in the United States in the hypothetical. We have had it in the voice space and it was a violent success.

Oh, wait, no it wasn't.

So, to some extent that has happened. We do have an example of it and I think that Rob is dead-on. What matters is the mechanism that delivers the service that you want. And I would say that the way that mechanism continues to improve is through facilities-based competition and not through resellers. It is through the fact that, as Link referenced, every time they bring FIOS into a market, cable moves up the DOCSIS chain.

Every time that T-Mobile, Sprint, or Clearwire launches a new third or fourth generation service, AT&T and Verizon do too. And by the way, so do Metro and Leap.

I do not want to be a one-trick pony but for every market that we look at, it is not just the cable and the landline provider. You have the wireless guys beating other too. In most markets 95 percent of consumers in America have three or more wireless providers and they are almost all facilities-based providers. These guys are beating themselves up over the "pipe," which is the mechanism by which services are delivered.

MR. MAY: Link, do you have a comment?

MR. HOEWING: If you look historically at the transformation of the industry, it really has been dramatic. And I am not just talking about investment here.

If you look, for example, at Verizon ten years ago, most of our revenue was from voice telephone service. If you

look today, much of the revenue in the company is in wireless and in broadband, which are competitive and essentially what I would call emerging technology markets. So the industry really has transformed and it would not have happened without the kind of competition that we have in the United States.

That transformation has actually resulted in more fiber being deployed in this country at the local level. We have plenty of fiber at the backbone level but at the local level we have not seen it any country except Japan and Korea.

And the Europeans are actually worried about that. There is a report from eDot, a French analyst firm, that looked at what is going on globally in fiber deployment. This report actually used the phrase, "Europe is lagging behind the United States." Our policy encouraging platform competition has put us in this position.

One of the things that discourages me in this debate is that the Free Press report, for example, describes the 97 percent market share for the cable monopoly, or the broadband monopoly, or terms to that effect. Well, that is after combining the telephone and cable companies to get that market share of 97 percent.

Obviously we are competing aggressively. I showed you the line loss numbers, and I do not use that proudly, but

the fact is that we are actively competing to keep those connections in people's homes.

If you also look at what is going on in those lines, you will see competition. For example, we are successfully getting television customers and I do not think anybody would have guessed that would have been possible five years ago when we entered that market. Every quarter we are successfully signing up hundreds of thousands of people to television service. A few of those are people that have not had pay TV but a lot of them are cable customers.

So I think we have done a pretty good job of encouraging the kind of competition that results in investment to what I think is most important to customer value, which is new technologies, choice, and prices.

MR. MAY: Okay. Let's turn to the audience to see whether they have any questions.

MR. CLELAND: Scott Cleland, NETCompetition.org.

To summarize, the big take-away that I am getting from this is that the rankings were all backward looking and what was real interesting to hear from you all today was the forward-looking trajectory, kind of the market pipeline, which is really quite impressive.

The rankings that have not been done yet, especially in wireless with Verizon leading those explosive numbers. What

was not mentioned is essentially the 3.0 DOCSIS improvement in cable, where the cable plant is going to rapidly get much faster. This trajectory is happening in all areas.

Currently, we are looking at how the U.S. is doing relative to the rest of the world. Instead, shouldn't we be asking, especially given the upward trajectory that we are experiencing now, whether policy changes will actually improve things or will they hinder the successes we have today?

MR. MAY: That is a good question. Try and keep your answers relatively succinct and we will just move down the line.

MR. GROSS: I think that Scott has it right but I would reframe it slightly differently. I do not like these rankings, because it implies a zero sum game with both winners and losers. Chris got it exactly right when he mentioned that wireless is in the process of exploding globally and especially in the United States.

I cannot tell you what that will do to the rankings because the 30 OECD countries are all relatively strong in wireless. I would expect that the technology deployment of LTE and WiMAX will be quite similar across the world. So, I do not think that it necessarily translates into increasing the U.S. ranking in that way but I just do not think that these rankings

matter. They are talking about things in a fundamentally flawed manner.

MR. MAY: Okay. We're just going to go right down the line, quickly.

MR. ATKINSON: It is an interesting thing for the OECD to really look at how well positioned nations are for Next Gen. We are talking Next Gen cable, Next Gen wireless, and Next Gen fiber to the home or fiber to the node. You have to say that the trends look pretty good in the U.S. They seem better here than in most countries but it would be interesting to have data to say whether that is really true or not.

MR. GUTTMAN-MCCABE: And I will address the second part of your question about policy and what government can do. I am only going to quote what Robert said earlier.

I would hope for not abdication, not regulation, but support. Because I think support will continue to push CAPEX and drive dollars to industries that are doing a good job right now propping up a good portion of our economy.

MR. HOEWING: What is most encouraging to me is that if you look globally at the numbers, there are 3 billion people that have a wireless phone today. That is astounding. So I think we are on the track and whatever policies these countries are following, they recognize that broadband

connections, connecting people together, is critical to both economic growth and to societal advancement.

And, as Rob said, every policy will probably be different because each country is different. But by and large, they are recognizing that they have to try to promote investment. Sometimes the government has a role in that, but often they recognize that private companies have to do it.

To me, all those things are positive. I am looking forward to the near future when most people have a broadband connection and I think a lot of them will be mobile. If you look at the numbers, for example, of African Americans and how they use broadband, one of the reasons that you see lower numbers in the household broadband for some segments of society, is that they tend to use the mobile more for data.

And that is great. One of the metrics that is left out of the debate is that there are other ways to connect, not just at the home.

MR. MAY: Okay. Yes? Just identify yourself and ask your question.

MS. SNOW: I am Anna Snow and I am here with the delegation of the European Commission. I do not want to engage in a beauty contest about ranking but we would like to bring a clarification to what has been said about what the Commission stated in the draft guidelines, which you were

referring to. These are draft guidelines which are not yet final and still up for consultation.

The important point is that there has not been a change in the European Commission approach. We have always encouraged a facilities-based competition as being the best, most effective, and sustainable form of competition. But we do not have enough of it. Hence, access regulation is very important. And to go very specifically to the quote you have made, I think the key word is to say that, for us, the important test has always been the presence or absence of effective competition.

I need to insist on the word "effective." The existence of two providers does not per se guarantee competition. It is still the role of the regulator to ensure that there is effective competition. If you look at what has been happening in the EU, you will see that there are often cases where the regulator imposes an access remedy, even though you may have had two competitors already.

MR. MAY: Well, thank you and I am glad you're here. I knew that if I said something about the EU, that the EU would be listening.

(Laughter.)

MR. MAY: I just didn't know how close they would be. But I am glad that you are here, Anna.

Another question?

MS. STEINER: I am Diane Steiner from NTIA. I am actually going to be the OECD meeting on June 15th, where we will be going into more detail about how broadband is measured in all the different economies in the OECD. I want to briefly give a little description of that activity.

The major change has been primarily attributable to Ambassador Gross' efforts over the past two years, along with people working from other like-minded nations, who have seen a lot of different technologies come about and want to have that included into the broadband count. The OECD has taken a position of looking at technology platforms, which they had not ever done before. Instead of just focusing on cable and DSL, they are now adding in WiMAX, 3G, and satellite technology.

But I wanted to bring up to the CTIA gentleman that the most difficult factor that they are trying to analyze is wireless and the influx of smart phones that might use Wi-Fi, 3G, and other technologies. How does one count these devices across different markets?

MR. MAY: That is very helpful. Are there any reactions to what Diane said?

MR. GUTTMAN-MCCABE: Yes, it is difficult. I think the OECD rankings can be used for some things, but should not necessarily be used for others. That is still going to be the case

even if they start to include wireless, because various questions start to arise: Do you measure the number of third-generation capable handsets or the percent of people that subscribe to a specific broadband plan? Do you then factor out the people who use it four times a month and just realize that it is more cost-effective just to use it on a case-by-case basis?

It is a difficult analysis and I do not know what the right answer is. The current thinking just misses the issues involving uptake or the people who have not been reached yet. When you lay cable, landline, fiber, and wireless over top, I think we provide the overwhelming majority of Americans with a broadband choice.

MR. HOEWING: I would like to point one thing out and this is actually a compliment to the OECD. Over the last few years, as we've debated these numbers, they have actually taken a look at what they are doing and have added a lot more data to that website.

They do measure, for example, fiber deployment. And it is actually pretty good data. So I am not criticizing the OECD and everything they do. I just think that we have been focusing on one snapshot when there is a lot of other data out there that is just as important to look at.

They have good data on rural deployment and they have been looking at that. The EU has good data on that too.

There are a lot of countries in Europe that do not have broadband in some parts of their country and they deal with the same problems faced by the U.S. So, as Rob said, I think we can learn a lot from some of those examples. There may be some things there that we should be taking a look at, in terms of getting broadband to areas that do not already have it today.

MR. MAY: I absolutely agree with that. I said in my opening remarks that all of that data is not at all irrelevant to our own considerations. And the fact that they are looking at their own data and the way they compile it is useful. We ought to be grateful for the efforts of people like Ambassador Gross and Diane for how they work with the OECD.

Next question?

MR. BENNETT: Hugh Bennett out of Department of Commerce, International Trade Administration.

There seems to be widespread agreement on this panel that demand is an issue in the United States. Dr. Atkinson cited Korea's example getting money to folks for computers and wondered if that is a possibility in the U.S.

But given the data from CTIA and the rest of the discussion about the future of mobile wireless broadband, should we think twice about picking winners or worse yet picking losers in terms of policy and dollars that could go

towards the hardware on the demand-side? And, if so, what is a better alternative to stimulate demand?

MR. ATKINSON: I do not think that we should let complexity get in the way of action. I think, for example, we could make a simple change to the Lifeline Link-Up program to make it technology-neutral. You could get a subsidy for a device and that device could be a 3G or 4G-enabled cell phone or a laptop or just a telephone. People ought to be making that choice.

I would argue exactly the same thing on the monthly view. Why are we subsidizing monthly POTS when a lot of people would rather have the monthly broadband fee subsidized and just get really cheap or, in some cases, almost free VoIP service?

So you should not have to pick a technology. Having said that, I think at the end of the day, we are going to still end up all having some sort of device at home. I just do not write ITIF papers on my cellphone but I use it incessantly when I am not in my office. You are going to have to have a mobile phone for doing all the mobile commerce things that we talked about. But you are also still going to have to have that device in the home.

MR. GUTTMAN-MCCABE: The only thing that I would add is that we actually filed something asking the FCC to

expand the Lifeline and Link-Up program, which right now is still POTS-based. But it is also one of the universal service programs at the FCC that is actually working. It is means-tested. It is based on people who actually need it.

Expanding it to include broadband and repurposing some of the money that is going to the POTS side of the equation probably makes sense. So we have supported it. We have had a number of our carriers weigh in, in support of that sort of an expansion. I think the program would help to get at the demand side and it could do so quickly. It is an existing program that already knows how to distribute money and does it pretty effectively.

MR. GROSS: Let me just add two quick points. One is just to follow on the earlier comment by Diane. I want to praise the OECD as I often do on a number of things.

Since I helped precipitate this whole brouhaha by writing a letter to the Secretary General of the OECD, complaining about their statistics, I want to make sure people know that almost immediately I got a very positive reply back from the Secretary-General of the OECD, Angel Gurría, agreeing that they needed to make fundamental reforms

It seems to me that one of the great things the government is doing, and I think should get great credit for it, is putting more information on the net. One of the great drivers of

demand for valuable services is to have the federal government lead. Government statistics become a very powerful tool for people seeking to find value in spending their $20-$50 monthly fee.

MR. HOEWING: The Pew survey shows you that although price is an issue with some people, a lot of other people just do not see anything compelling on the Internet or lack digital literacy. There are certainly challenges there. But the interesting thing that I have found in the focus group work that we have done over the years is that when you talk to people about dial-up, a lot of time they will say, "I don't have broadband today, but as soon as my child gets to school, I'm getting it."Or "I don't have broadband today, but my boy wants to get into gaming, so I'm going to get it." I think over time, some part of this is going to solve itself, because the demand will start rising.

The other thing is that if you look at the market and how it is reacting, you already have companies in the wireless industry offering subsidized netbooks that are pretty cheap with a two-year contract. You can get broadband and a really cheap device connected to it.

Some of this is getting sorted out by the market, because it also recognizes that there is a lot of demand that

they can meet today, without changing the way they offer their product.

MR. MAY: Rick is going to ask his question, and then, again, I am going to ask the panelists to just take 30 seconds give their FCC comments in two sentences. That will be the wrap-up.

I mentioned earlier that David is a former law partner of mine and, of course, so is Rick Brecher here.

MR. BRECHER: That's the one thing that David and I have in common.

MR. MAY: I knew he was going to ask a nice question or I would not have called on Rick. One way to make sure that you have a very nice crowd here, which we really do, is to ask a lot of your former law partners to come.

(Laughter.)

MR. MAY: So Rick, with that, you can ask a nice question.

MR. BRECHER: My question is kind of a follow-up to the previous one that was really precipitated by a comment that Rob Atkinson made.

And let me preface it. I am not terribly interested in rankings. If I look at the OECD rankings, it is kind of like looking at the U.S. News rankings of colleges and law schools. It is great gossip, but it does not tell you very much.

What I do care about is penetration. In the telephone world, the Lifeline Link-up program seems to work pretty well but the program is subsidizing a connection cost. It reduces a $60 charge down to $30. The phone is not subsidized, but you can buy a phone for $10.

In the broadband world, the real entry cost to me is the device, whether it's a laptop or a desktop. Even with prices dropping, devices that are internet-access capable are going to be $300 and up. That is a big barrier to entry for a lot of people with low-income. The government can put whatever it wants on its website. You can have all the education in the world. $300 is still a lot. What should the government do, if anything? And how does it do it?

MR. ATKINSON: I think one of the most effective ways to do it would be to catalyze a large share of community-based efforts.

For example, I was helping the Chicago Mayor Daley a little bit on a digital divide task force. One of the proposals that I made will allow people to donate their unused computers one day a month, at a pick-up place, have them refurbished by kids in technical schools or high schools, and then give those computers to low-income people.

This program requires that a person take a four-week course to learn digital literacy and at the end of it you get a free

computer. You could engage in large-scale purchasing with computer makers and a contract with Dell or HP, for example, to get big subsidies. This could be supplemented with some government money in order to get the price fairly low to do these kinds of programs.

But I think just giving a PC to somebody is not enough. You need to tie in this kind of training program that Chicago is doing. I would like to see the NTIA catalyze a national effort that would ultimately be locally based but nationally supported and coordinated.

MR. MAY: Let's just get one more comment on this. Go ahead, David.

MR. GROSS: I have a slightly different view. In the sense that low-cost, free devices are terrific and presumably would help the penetration. However, what we found internationally is it was a lot of effort to do that sort of thing. There were a tremendous number of computers donated and there are a lot of tasks necessary to get the computers ready for distribution.

In many places, digital literacy isn't even the real gating factor. In a lot of places the continuing recurring costs continue to be that primary gating factor.

Think back to last Friday, when President Obama gave a terrific speech on cyber security that probably scared

anybody who isn't already online from ever going online.

(Laughter.)

MR. GROSS: In order to protect yourself when you have an always-on broadband device, you have got to spend a lot of money to keep updating your software. You have to make sure you have the newest SPAM and virus protection, and so forth. For many of us, that's just the cost of doing it and we do not think twice about it. If you are a poor person or are not technically literate, those are big barriers. These problems are not solved by just having a device. It is one of the issues why I think it is very important to delve into different areas on net neutrality.

One of the advantages of the mobile devices, as Chris would quickly point out, is that you basically have not had this class of problem because you have more of a walled garden, for good or for bad. Part of this is that you do not have that same "bugginess." You do not have that same class of viruses. As a result, people often feel much more comfortable accessing the Internet on their mobile devices than they do on a traditional PC. It gets very complicated to get that last group on.

MR. MAY: Those were great responses. We are going to close by allowing you, if you would like, to look directly into that camera and say, "Chairman Copps, these are the top one

or two elements that I think should be in the national broadband plan."

As I said, I am sure at some point I am just going to submit the transcript to the Commission. This was a terrific session.

I will start with Link and then we will go right down the line and just take about 30 or 40 seconds.

MR. HOEWING: Obviously, our comments are still in draft form, but I think we are going to spend a good amount of time trying to lay out a vision for broadband. Some of the things I talked about today will be included such as where the industry is going, the metrics, and why we think the existing policies in terms of competition and promoting investment are working.

We are also going to spend some time, though, talking about things that could be done to improve Internet access and the use of broadband. For example, we certainly agree with the comment David made that there is a lot more that can be done in the security side and in making an on-line experience safer. Networks can help with that.

That does not mean that you cannot still have a good open internet connection and access any content that you want to. But the internet itself was never designed with network functionalities we could implement today that would actually improve security.

Finally, we are going to certainly talk about the importance of deployment. Even though I agree with some of the comments that were made here earlier, that do not necessarily think that it is largely a deployment issue. We have about 8-9 percent of the population that cannot get broadband today.

There are some things that we think would be helpful, including the idea that I mentioned of trying to provide some support for middle-mile deployment. A lot of the data from rural areas looks like the cost of deployment in those areas is higher than it needs to be because there is just not enough middle-mile access.

MR. MAY: Great. Chris?

MR. GUTTMAN-MCCABE: We are going to focus on a couple areas and the theme will probably again go back to what Rob had said about the FCC providing support for the continued development of broadband. We are in the midst of a sort of a technology revolution, both in the deployment of fiber and the move-up the DOCSIS ladder, and in wireless.

Then we will talk a lot about what wireless needs to continue to advance. I had referenced spectrum and the need to begin the effort to help secure the redeployment of some spectrum that is available right now.

Then, most importantly, is to continue to give wireless providers the ability to deploy towers. We are having a difficult time getting our towers sited with some of those zoning authorities around the country. It is not specific to one region. And we are finding that some are languishing for one, two, or three years.

The most troubling fact that we have found is that a significant percentage of the ones that are languishing are actually co-locations. A tower is already up, and we are just trying to put antennas on them. If that was the problem a year and a half ago when we filed our petition to put a shot clock together, it is certainly going to be a problem as the 700MHz and AWS spectrum comes to market and carriers like Clearwire and Cox Communications, and others that are jumping into wireless broadband, try to launch their service.

MR. MAY: Speaking of a shot clock, you could see how these gentlemen adhered to my 35-second rule.

(Laughter.)

MR. MAY: Rob?

MR. ATKINSON: I was going to answer all 450 questions with a one-word answer.

(Laughter.)

MR. HOEWING: Can you say it publicly?

MR. MAY: You counted those questions just like you got to page 419 in the early OECD report.

(Laughter.)

MR. ATKINSON: I did.

We are going to say two general things. One is that the goal should be to facilitate. I give the administration a lot of credit, by the way, for not abdicating.

The second thing I will argue is that we run the risk of fighting the last war. Japan was on Mobile Japan (m-Japan), Ubiquitous Japan (u-Japan), and now they are going onto digital Japan (d-Japan) soon. These countries have broadband somewhat in place and are moving onto the next step, which is digital transformation. This includes IT usage in healthcare, education, government, and infrastructure.

I think we run the risk of fighting a war that is looking backward. Instead, we need to be thinking about a much broader vision. We need to at least be teeing that up in this broadband strategy about how we do that.

MR. MAY: And finally, Ambassador Gross?

MR. GROSS: I will be very brief: Stay the course. Promote facilities-based technology and neutral competition.

MR. MAY: Good. David really adhered to the shot clock. This was a great panel. Join me in thanking our panel today.

(Applause.)

(The meeting was concluded at 2:02 p.m.)