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FEDERAL COMMUNICATIONS COMMISSION

NATIONAL BROADBAND PLAN WORKSHOP  
BROADBAND OPPORTUNITIES FOR INDIVIDUALS WITH  
DISABILITIES

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

2 (9:34 a.m.)

3 MR. LEVIN: Good morning, everybody, and  
4 welcome to the next in the ongoing series of FCC  
5 workshops on the National Broadband Plan.

6 I'd like to begin by welcoming -- I'm  
7 Blair Levin, the executive director of the Omnibus  
8 Broadband Initiative, the group within the FCC  
9 that is working on the plan and other  
10 broadband-related issues.

11 I'd like to begin by welcoming  
12 Commissioner Michael Copps, who I believe everyone  
13 knows, to welcome everyone. Commissioner Copps.

14 MR. COPPS: Thank you very much. Good  
15 morning. I did not plan to say anything. I'm  
16 here to listen and to learn, but Blair asked me to  
17 say a word of welcome so I am happy to do that. I  
18 am delighted to see so many old friends who have  
19 labored for so long and so valiantly to advance  
20 the ball in disabilities access. This is really a  
21 good sign today that we're having this meeting.  
22 I'm delighted that Blair is moderating, and I'm

1 delighted our chairman of the new broadband team  
2 has given so much prominence to the disability  
3 access obligations that this Commission has by  
4 statute and now by general intellectual  
5 enthusiasm, I think.

6 I think a new day is dawning for  
7 disability rights when both the letter and the  
8 spirit of the law will be better observed, and  
9 there is no more important place for this to  
10 happen than in the area of broadband because  
11 broadband is so important to the future of every  
12 single American. And every single American needs  
13 to participate in its benefits, broadly and  
14 thoroughly. And that means not just being able to  
15 receive broadband, but being there at the  
16 creation; being there today when we're talking  
17 about developing a plan and developing a strategy;  
18 and making sure that that broadband serves the  
19 interests of all Americans.

20 So, with that, I'm going to hush up and,  
21 as I say, listen and learn. But we are delighted  
22 that you are all here today, and thank you very

1 much for coming.

2 MR. LEVIN: Thank you very much. And  
3 thank you very much for joining us. I know of  
4 your interest. I also know that you have a very  
5 busy schedule and at some point you may have to  
6 walk out. I know your staff is here, and we'll  
7 certainly give you a full report on everything  
8 that is said.

9 We're really looking forward to having  
10 participation of everyone in this room, but also  
11 people who are not in this room who are listening  
12 to us either by phone or online. We have a packed  
13 agenda. Later in the morning we'll be hearing  
14 from the president's special assistant on  
15 disability policy, Kareem Dale. We're also very  
16 fortunate to have Marcie Roth, the senior advisor  
17 for disability issues at FEMA, be with us today.  
18 She'll say a few words, but also participate in  
19 this panel.

20 I want to take a moment to talk about  
21 why we believe the National Broadband Plan is one  
22 of the most important initiatives the Commission

1 has ever undertaken and what this plan hopefully  
2 will mean for people with disabilities. In less  
3 than 6 months from today -- 181 days to be precise  
4 -- the FCC must deliver to Congress a National  
5 Broadband Plan that will seek to ensure that all  
6 people of the United States have access to  
7 broadband capability.

8 Over the last month or so I've had the  
9 great honor of working really day and night with  
10 an extraordinarily talented group of people, both  
11 long-term FCC employees and other folks that we've  
12 brought in, who are really driven to stay here day  
13 and night in an effort to try and solve the  
14 problem of digital exclusion. What lights the  
15 fire, I think, for all of us is the sense that in  
16 the not too distant future, not having access to  
17 broadband will effectively deprive a person of  
18 many of the rights and opportunities that all of  
19 us should enjoy. But as we think about what  
20 exclusion could mean in the future, we must also  
21 think about what exclusion has meant today and how  
22 broadband can be used as a tool for inclusion for

1 a community that has often suffered from barriers  
2 to information, to employment, to many other  
3 things we take for granted. Broadband is an  
4 extraordinary platform to provide access and  
5 inclusion to persons with disabilities.

6 So the stakes are high for us to get it  
7 right. People with disabilities have greater  
8 unemployment and poverty rates, lower income and  
9 education rates than the general population.  
10 Broadband has the potential to level that playing  
11 field now in all aspects of people's lives: In  
12 education, jobs, health care, and social  
13 connection. But before we can level the playing  
14 field we have to close the gap. Estimates, and  
15 they're a little bit old, we had -- the most  
16 recent we have are from 2003, place the  
17 penetration rate of broadband services for people  
18 with disabilities at about half that of the  
19 general population, about 30 percent instead of  
20 60.

21 The issues concerning access to  
22 broadband capability by people with disabilities



1 should be fully integrated into this plan. And  
2 that means that really starting off with this  
3 session, but continuing through the whole process  
4 we have to analyze the most effective and  
5 efficient mechanisms for ensuring broadband access  
6 to people with disabilities; we have to provide a  
7 detailed strategy for achieving affordability and  
8 maximum utilization of broadband by people with  
9 disabilities; we have to evaluate the status of  
10 deployment for broadband services for people with  
11 disabilities; and we have to consider people with  
12 disabilities as we prepare a plan for use of  
13 broadband infrastructure and services to further  
14 numerous national purposes, including consumer  
15 welfare, civic participation, community  
16 development, public safety, health care,  
17 education, and job creation. And I'm delighted  
18 that Christian Kane of our staff, who is in charge  
19 of that particular part of the project, is with us  
20 here today.

21 But if the stakes are high, so are the  
22 opportunities. One of the things that broadband

1 does is create a platform for innovation that is  
2 not bound by geography. It aggregates demand from  
3 around the world so that markets previously too  
4 isolated or too small can be the subject of  
5 research and innovation -- large enough to attract  
6 the attention of inventors and entrepreneurs to  
7 think in new ways. As we think about the tools  
8 and applications that we want to come out of  
9 broadband generally, we should also think about  
10 tools that enable persons with disabilities to  
11 fully access the riches to be found in the  
12 Internet. And those tools, whatever the  
13 disability, can serve persons around the world.  
14 And it would be great if as part of this plan the  
15 United States became the center -- a strategic  
16 center for developing applications and new tools  
17 for people all around the world.

18 It's an extraordinary mission and  
19 extraordinary opportunity. We have a lot to do.  
20 We need your help with this historic endeavor. We  
21 need to understand the accessibility and  
22 affordability barriers that people with

1 disabilities face. We need facts, we need data,  
2 we need the benefit of your experience and an  
3 honest discussion of what will work and what won't  
4 as we seek to ensure that people with disabilities  
5 can fully realize the promise of broadband.

6 So with that I'm very pleased to  
7 introduce Cheryl King, who is the deputy chief in  
8 the Disability Rights office, the coordinator of  
9 this meeting. I might note that the format for  
10 this meeting is completely different from the  
11 formats of the meetings we've had before. It's  
12 very innovative. Cheryl really was very  
13 enthusiastic about it -- suggested it. And I  
14 honor that spirit of innovation. It's a spirit we  
15 really need as we undertake this. She's bringing  
16 a lot of energy and passion to this mission, so  
17 please join me in welcoming Cheryl King who will  
18 now moderate this session.

19 (Applause)

20 MS. KING: Thank you. I have a  
21 lavalier microphone so I hope you can hear it. Thank  
22 you.

1                   Thank you, Blair. And thank you,  
2 Commissioner Copps, for coming.

3                   I have a few logistics to go through for  
4 us today before we get started, but we are going  
5 to be working very quickly. We've got a lot to  
6 hear and say.

7                   First of all, please turn off your cell  
8 phones. For evacuation and shelter-in-place  
9 information, should there be a shelter-in-place  
10 alarm, you will stay right here with us. If it's  
11 an evacuation, find the nearest exit. Follow the  
12 crowd. Go out where you came in. And we are well  
13 able to keep you informed and take care of you.

14                   The restrooms are in a parallel hall  
15 behind the Commission meeting room to the back of  
16 you. Also, there is an education broadband  
17 workshop this afternoon at 1 o'clock.

18                   Please feel free to stay around. You  
19 can help them understand your issues, perhaps, and  
20 maybe learn some things from them, as well.

21                   I want to introduce our online  
22 coordinators, Arlene Alexander and Dianne Mason,

1 who is just walking out of the room. They are  
2 monitoring the online participants. We had even  
3 more registrants online than we had for you guys  
4 to come here. And so we're real excited about  
5 that. We know that there's coverage across the  
6 country.

7 The Town Hall format. I had an idea on  
8 the way in this morning that I should have a box  
9 right here, and I wanted a big box because I  
10 wanted to say we're thinking out of the box. And  
11 I think that that serves us very well and the  
12 issues that we're dedicated to.

13 In the Town Hall format, the FCC staff  
14 will pose questions to you. If you are called  
15 upon to answer the question, we have a mike that  
16 can roam and we also have a stand up mike. It's  
17 your preference. If you'd like to answer a  
18 question, raise your hand and I will moderate the  
19 answerers of the questions and direct a microphone  
20 to you if that's what you would like. We do have  
21 some folks who are participating via a phone  
22 bridge and we want to hear from them at various

1 points in the Town Hall. And so we may have some  
2 people joining us by audio in the room.

3 All of the input today will be on the  
4 record in the broadband docket. So if you have  
5 something that you really want to say and you  
6 don't get a chance today, please send it in to us.  
7 Let us know. We fully expect follow up, ex  
8 partes, and communications from you. In fact,  
9 it's essential and we're going to make sure that  
10 that happens.

11 If you are called upon to speak, please  
12 identify yourself. The first time you speak, if  
13 you would identify yourself and your affiliation  
14 if you have an affiliation that would be  
15 informative to us. And then each time you speak  
16 after the first time, please also identify  
17 yourself so that the people on the bridge, other  
18 folks in the room and elsewhere can know who is  
19 speaking. There is a court reporter. There will  
20 be a transcription of this proceeding.

21 And so you're identifying yourself is  
22 really essential for us to know who said what, so

1 please remember to do that.

2           During the question-and-answer period  
3 there may be issues that are raised that we're  
4 really not going to address today, but I assure  
5 you that we will put them in a parking lot and we  
6 will bring them to the attention of the Commission  
7 and the broadband folks in due time.

8           Most importantly, I'm so excited to tell  
9 you we have really breaking news. There's going  
10 to be a Phase 2 of disability opportunities. On  
11 October 20th, in this room -- and I guarantee you  
12 will all have an e-mail, you know, within a week  
13 with all of the details -- but our plan is to  
14 focus on accessibility: The hardware, the  
15 software, the equipment, the training, the tech  
16 support. We're going to have accessibility  
17 vendors. We're going to have accessibility  
18 specialists in the panel format. We're also going  
19 to make available room for exhibits, so we're  
20 going to be asking the vendors to bring their  
21 conference exhibits so that we can see. And all  
22 of the Commission staff and interested parties

1 will have that made available to them and we  
2 certainly will be giving VIP passes to all the  
3 folks working on the broadband plan to come and  
4 view those exhibits.

5 Hard planning for Phase 2 will start  
6 about 1 o'clock this afternoon. So, if you're  
7 interested in participating, please send me an  
8 e-mail, let me know that. And I'm sure that I'll  
9 be in touch with you in the future to have you  
10 help me get everything we need to have in that  
11 second phase on the record.

12 MR. LEVIN: Can I just say a quick thing  
13 about Phase 2? First of all, congratulations to  
14 you and your shop.

15 It's a great idea. We're very  
16 enthusiastic about it. Generally speaking, we're  
17 all in Phase 1 right now, which is that  
18 fact-gathering phrase. That's what these  
19 workshops are about. That's what the comment  
20 period is about. It's a lot of what the staff  
21 that's engaged is about. But we're going to be  
22 moving very, very quickly, particularly right



1 after the September meeting where we're going to  
2 kind of lay out what we've learned to date to this  
3 Phase 2. And we really need concrete solutions.  
4 We really need people to come together and give us  
5 the best ideas. Congratulate you for having a  
6 terrific -- kind of creating a platform where  
7 folks can come together on that very quickly.

8 Obviously, if our report is due by  
9 mid-February, we're not actually writing it on  
10 February 14th. We have to do a lot of work well  
11 ahead of time. We have to have real solutions in  
12 hand in the November-December timeframe. So, I  
13 appreciate your accelerating that. Appreciate all  
14 you're doing and really want to encourage people  
15 to be prepared then to really give us the answers  
16 we need. So thank you very much.

17 MS. KING: Thank you, Blair. Now for  
18 today's opportunity. Greg, will you please ask  
19 the first question? And I will moderate the  
20 answers from the audience and the online  
21 participants.

22 MS. LOVE: Sure. It would be my honor.

1 Thank you.

2 I have a general question to start with;  
3 however, it is targeted to service providers and  
4 manufacturers. However, anyone is free to make a  
5 statement.

6 Specifically, what challenges do you  
7 face in making your products, equipment, services,  
8 software, and networks accessible to people with  
9 disabilities? What strategies, such as universal  
10 design, focus groups of people with disabilities,  
11 do you employ to make your broadband products  
12 accessible to people with disabilities?

13 Throwing that question out there for  
14 you.

15 MS. KING: Thank you. Gregg  
16 Vanderheiden, are you available on the audio  
17 bridge? Gregg?

18 MR. VANDERHEIDEN: Yes. I'm here.

19 MS. KING: A little bit louder.

20 MR. VANDERHEIDEN: Hello?

21 MS. KING: We can't hear you well.

22 MR. VANDERHEIDEN: I'm on the audio. If

1 you can't hear me, I'll call back in on another  
2 line.

3 MS. KING: We got you better now. Go  
4 ahead, Gregg.

5 MR. VANDERHEIDEN: One of the areas that  
6 we've been looking at -- first of all, my name is  
7 Gregg Vanderheiden. I'm director of the Trace R&D  
8 Center at the University of Wisconsin and we have  
9 the Rehabilitation Engineering Research Center on  
10 Information Technology Access.

11 And we also work with Gallaudet  
12 University on the Telecommunication RERC.

13 One of the problems that we faced -- I  
14 co-chair the Web Content Accessibility Group, and  
15 in the process of working on the guidelines one of  
16 the things we came to was a point where when we're  
17 saying that a web page is accessible -- and many  
18 of these web technologies now are being used for  
19 information, communication, public services,  
20 public education -- and so we came down to a  
21 definition that accessibility meant that you could  
22 either use it directly or you could use it with

1 the AT that people use, the assistive  
2 technologies. And a concern that came up was  
3 which assistive technology. And so the discussion  
4 ensued and somebody said, well, if it works with  
5 any assistive technology should it be considered  
6 accessible? And we were concerned that that would  
7 make it available to some, but how about all of  
8 the people who couldn't, you know, afford that  
9 premier assistive technology.

10 And then a silence fell over the room  
11 because the alternative was to say that it would  
12 work with all of the assistive technology or the  
13 assistive technology that everybody had, including  
14 people who don't have very many resources and  
15 couldn't afford the better assistive technology.  
16 And we realized very quickly that that would mean  
17 that the guidelines would have to be prescribing  
18 web pages that were from 10, 15 years ago. That  
19 with the modern technologies -- and if you look  
20 and if you work with the companies and you see  
21 what's coming in the next generation of web  
22 technologies, you can see that it's only going to

1 be the very best AT that's going to be able to  
2 access some of these.

3           And only the latest versions of the best  
4 AT. And the best AT doesn't even exist for some  
5 groups.

6           And there's a real concern that as we  
7 make the broadband and the services on it so  
8 integrated throughout our society -- and education  
9 and even the public information that we get --  
10 that we have to find some mechanism to make sure  
11 that those of us with the least resources have a  
12 means of accessing the web. That they have at  
13 least what I would call basic access so that they  
14 can at least get the information, participate in  
15 discussions like this, be able to participate in  
16 the public policy discussions, or social or  
17 personal, whatever it is, educational discussions  
18 they want to.

19           So, one of the things that we're really  
20 wrestling with right now is how can we create  
21 something that will allow individuals who don't  
22 have resources to be able to access? And the best

1 solution we've seen so far is universal design as  
2 you pointed out. If the access is actually built  
3 right into the systems and the architectures, et  
4 cetera, that we're using so that when people just  
5 come to it -- when they come to it in their  
6 community centers or they come to it in other  
7 places they were able to access and use it -- this  
8 is about the only way I think that we're going to  
9 be able to have a level playing field for people  
10 who have disabilities if we want it to be all of  
11 us and not just those who have resources or who  
12 have connections to a special program that will  
13 get them special technologies, et cetera.

14 And so this is going to be a very  
15 interesting challenge. You know, how do we do  
16 this and how do we work to create a synergy  
17 between special technologies and the access  
18 features that should be just a part of the system  
19 naturally so that we have a level playing field,  
20 so that we have the ability for everybody to  
21 access it and not just those that have the  
22 resources?

1 MS. KING: Thank you, Gregg, very much.  
2 We appreciate that.

3 MR. LEVIN: Can I ask a couple follow-up  
4 questions?

5 MS. KING: Sure.

6 MR. LEVIN: Gregg, when you talk about  
7 that are you thinking about it in terms of the  
8 devices or are we thinking about it in terms of  
9 the software layer? And also, when we think about  
10 the devices, there are so many, there's such a  
11 multitude of different kinds of devices now. How  
12 should we think about that? And are there, you  
13 know, is there some way of analyzing what the  
14 tradeoffs are and kind of -- you know, if we're  
15 talking about the PCS, maybe yes. But if we're  
16 talking about netbooks, is there a difference? If  
17 we're talking about cell phones? What's the right  
18 way of analyzing both where the requirement should  
19 be and also whether it really is at the device  
20 level, or at some kind of software level, or  
21 something like that? Or is it the network level?

22 MR. VANDERHEIDEN: That's really an

1       excellent question. We're looking at this problem  
2       and there's actually an effort to try and address  
3       this called "Raising the Floor."

4               And at first we were thinking of, you  
5       know, cloud computing and building everything into  
6       the Internet -- into the network itself. That way  
7       it would be there and you could draw it down on a  
8       laptop or a cell phone. Or you, for example,  
9       could turn to the person next to you and say, oh,  
10      can I borrow your computer? But if a person has a  
11      disability, they should be able to turn to the  
12      person next to them -- because they don't have one  
13      or the one in their community center -- and sit  
14      down and invoke the access features that they  
15      need. If they have some special interface,  
16      physical interface, then they should be able to  
17      bring it and use it with the device and be able to  
18      access it.

19              As we've discussed this with companies  
20      and assistive technology vendors, et cetera, what  
21      we find is that it probably is going to need to  
22      exist in the network and in the devices



1 themselves. It will have to be basically in the  
2 infrastructure. So it would be something that  
3 could be done largely, if you will, in the cloud,  
4 in the broadband network itself. And then it  
5 would be able to be brought into the various  
6 devices or invoked and literally operated remotely  
7 so that you could have your assistive technology  
8 be in the network for you, available so that you  
9 could use it on any computer that you sat down to  
10 without installing everything on the computer.

11           If most of you are like people I know,  
12 if somebody came up and said can I install  
13 something special on your computer so that I can  
14 -- and you stop listening right after "can you  
15 install something special on your computer."  
16 We're afraid to let people put strange things on  
17 our computers. There are ways of doing it now  
18 with technologies that are coming that you'd be  
19 able to invoke these and use them without them  
20 actually being installed or resident on individual  
21 computers.

22           MR. LEVIN: And if I can ask one more

1 follow-up. To the extent that kind of the next  
2 wave of computing involves voice commands and kind  
3 of changing the paradigm for the way we interact  
4 with the computers, how does that change the  
5 analysis?

6 MR. VANDERHEIDEN: Well, this actually  
7 gives us many more capabilities. One of the  
8 things that was pointed out by some of the  
9 operating systems companies is that some of the  
10 resources that we would normally have had to, you  
11 know, have on a remote server or use are now  
12 present in computers. You're going to be  
13 hard-pressed to find a computer in the next five  
14 years that doesn't have voice technologies as a  
15 natural part of it. (inaudible), you know, voice  
16 like the mouse is to the keyboard.

17 When the computer first came out  
18 everything was done with a keyboard. And then the  
19 mouse came along, and for a long time the mouse  
20 was something which was an alternate way of doing  
21 what you could do with a keyboard. Then we  
22 started getting away from that, so some on the

1 keyboard, some on the mouse, and that was a  
2 problem. But as we've moved back to saying, well,  
3 either the mouse or the keyboard, then the mouse  
4 is no longer a required thing. And we even have  
5 mouse keys and things so that you can control a  
6 mouse-like function from the keyboard.

7 The same thing with voice. As this  
8 comes on board, it can be a powerful new mechanism  
9 for people who have voice and who have hearing to  
10 be able to interact and overcome some of the other  
11 disabilities, whether they're cognitive language  
12 and learning or physical, et cetera. But we need  
13 to be sure that part of the infrastructure, if you  
14 will, is that all of the functionality can also be  
15 done without voice and without hearing. That  
16 would allow, again, the parallel.

17 So, these things can be thought of as  
18 barriers to some disabilities, but only if we make  
19 them the only way to do something. A better way  
20 is to see them as being components that actually  
21 make it easier and can lower the cost for access.

22 MR. COPPS: Can I ask a question here,

1 Blair?

2 MR. LEVIN: Sure. Go ahead.

3 MR. COPPS: This is Mike Copps. That's  
4 an excellent presentation and I really appreciate  
5 the effort that went into it.

6 I would like to just get some sort of a  
7 handle on how ambitious an initiative this is  
8 we're talking to in terms of expenditure, some  
9 feedback from you on what kind of receptivity you  
10 have had to a concept like this with those who  
11 design systems and build networks, what kind of  
12 input you had into that. And then maybe some  
13 comment on long term, I suppose. We're looking at  
14 something that's expensive, but doing it at the  
15 outset may be a lot better than having to come in  
16 and retrofit technologies for this later on.

17 But in any event, if you could just  
18 respond to some of those thoughts I'd appreciate  
19 it.

20 MR. VANDERHEIDEN: Okay. I have a  
21 connection that every now and then starts cutting  
22 in and out for a few seconds and then comes back.

1           How ambitious, resources, reception, and  
2 the last one had to do with do we need to do it  
3 now versus later so that we don't have to retrofit  
4 it. Is that correct?

5           MR. COPPS: Fine.

6           MR. VANDERHEIDEN: Okay. How ambitious?  
7 I think it's a very ambitious kind of thing. What  
8 we're talking about here is to change the order of  
9 things. The current order is that we will build  
10 the world and then for people with disabilities  
11 we'll come back later and we'll patch it. We have  
12 seen that that doesn't work very well. We've even  
13 seen major efforts that the FCC has tried to  
14 support in terms of going back and adding access,  
15 for example, to TTY and to the cellular phone  
16 system, and the problems, the costs, and the  
17 reliability when it was all done, all things that  
18 are problems.

19           If when it was originally set up the  
20 system had been set up to not only worry about  
21 transporting voice, but also the characters, it  
22 would have been in the original code books. It

1 would have been in the original architecture, and  
2 it would have flowed naturally. And as a matter  
3 of fact, there's a lot of mainstream applications  
4 that would have all then facilitated and all be  
5 possible today that we don't have today just  
6 because it is harder to do that.

7           When we had the opportunity to do SMS,  
8 for example, (inaudible) and look at it today.  
9 The ability to have things that really would have  
10 been inspired by individuals who had disabilities  
11 and having text communication would have led to  
12 really robust kinds of systems today that we don't  
13 necessarily have with SMS message reliability not  
14 being guaranteed for delivery and things like  
15 this. Now when we want to turn to it for  
16 emergency, we find that it's been scary to do.  
17 And the infrastructure and the companies, the  
18 carriers, they don't want to talk about using SMS  
19 for emergency because they don't want to have to  
20 look at some of the reliability issues and things  
21 because it came as it did as an add-on and not as  
22 something that was originally planned to be

1       wherever there was speech there would be text and  
2       have a robust system.

3               So in this case what we're talking about  
4       is having -- taking a look at building  
5       accessibility as part of the infrastructure so  
6       that when -- and this would involve involvement of  
7       -- providing, if you will, centralized kinds of  
8       basic accessibility functionality. It would  
9       involve providing support to make sure that the  
10      assistive technology areas are also supported.  
11      One of the problems there is it's very hard to  
12      (inaudible) is lower and you get a price and  
13      volume conflict.

14             In some respects I look at this as if  
15      you had a country and in the country you had  
16      nothing, but private schools and they serve 15 or  
17      20 percent of the population, but they couldn't  
18      really give away, if you will, free education to  
19      the whole country. And so we have people who have  
20      and have not good educations. And we decide to  
21      come into this with a free public education  
22      system. It's definitely going to impact the

1 private schools, but what if we could do it in a  
2 different way? What if we could do it so that  
3 instead of coming in and they would be seen as  
4 being competitive, you would say, well, we need to  
5 reach the rest of the population. We're not going  
6 to be able to do it in a private school mechanism,  
7 so what if we create a public school system, but  
8 you can come over and use our athletic facilities.  
9 You can come over and you can use our gym and our  
10 fields. You can have your students attending our  
11 classrooms and then you can teach other more  
12 advanced kinds of specialized courses on top. In  
13 other words, you can build a system where there's  
14 a basic level of accessibility and then you have  
15 another layer of more advanced kinds of  
16 functionality for employment and other types of  
17 situations where you'd bring it in. But we at  
18 least make sure that everybody has the basic  
19 access level.

20 MS. KING: Gregg, thank you very much.

21 MR. VANDERHEIDEN: The reception has  
22 been very positive. Part of it is, wow, this is



1 an ambitious kind of thing to look at and so we  
2 need to sit down very carefully and look at it. I  
3 think the reception from assistive technology  
4 area, of course, is one of careful thought, if you  
5 will. I was talking to one person who said -- an  
6 assistive technology vendor -- and he said, well,  
7 he said, I'm of three minds. First, I got into  
8 this business to try and work for people with  
9 disabilities and to get things to them. And this,  
10 you know, sounds very exciting.

11 Secondly, he said, I have an assistive  
12 technology company and I worry about how this will  
13 affect that company.

14 And there will still always be a need  
15 for assistive technology and can this be done in a  
16 way that it will not cause us to lose enough of  
17 our base that we can't be there for those people  
18 who still need assistive technologies that go  
19 beyond what would be the basic level.

20 MS. KING: Gregg, this is Cheryl.

21 MR. VANDERHEIDEN: And then thirdly,  
22 there's -- he says I have to be honest. We have

1 stockholders and stakeholders and I have a  
2 fiduciary responsibility, so I need to be thinking  
3 of them as well. So there's business and then  
4 there's concerns about making sure that this  
5 really works in a robust way.

6 So, the reception has been, as I said,  
7 very positive.

8 MS. KING: Hello?

9 MR. VANDERHEIDEN: In other countries it  
10 is seen as being perhaps the only way that we can  
11 actually reach out and provide access for all the  
12 different disabilities in all the different  
13 languages and different cultures.

14 And finally, in our own country we have  
15 good assistive technology in some areas and then  
16 in other areas we don't have as good a technology.  
17 And it's very hard and expensive to build up  
18 assistive technologies that can handle content.

19 MS. KING: Gregg, can you hear me now?  
20 This is Cheryl.

21 MR. VANDERHEIDEN: Yes.

22 MS. KING: Gregg, thank you so much for

1 your input. We're glad you were able to join us  
2 this morning.

3 We have a comment from Jim Tobias, who  
4 is an online participant. And if you'll just give  
5 me a moment to read it to you.

6 It's not about the technical change as  
7 much as it is about user behavior, including how  
8 they inform themselves and make decisions. We  
9 don't know much about consumers with disabilities.  
10 We can assume that they fall along the regular  
11 adoption curve: Innovators, early adopters, et  
12 cetera. But there are other issues overlaid on  
13 that. For example, so many people with  
14 disabilities do not know or act as if they do not  
15 know that they have a functional limitation.  
16 Undiagnosed hearing loss is huge, something like  
17 80 percent.

18 Then even following a diagnosis, there's  
19 no remediative action. Even if there is  
20 remediative action, like getting hearing aids,  
21 there is underutilization. And this goes for  
22 other disability categories, as well. Until we

1 get a better handle on all of that, we may not be  
2 able to make as much progress as we want no matter  
3 how much wonderful new technology becomes  
4 available.

5 And thank you, Jim Tobias, for that  
6 contribution. I believe that someone from the  
7 Telecommunications Industry Association was  
8 interested in chiming in on this question, too.

9 Mary Brooner?

10 MS. BROONER: Good morning. I'm Mary  
11 Brooner. I represent -- I'm chairperson of the  
12 Accessibility Working Group of the  
13 Telecommunications Industry Association. We are  
14 part of the Public Policy Committee of TIA. TIA's  
15 membership is manufacturers of hardware, network,  
16 software developers -- the companies that will  
17 make the product to deliver the broadband.

18 I want to thank you for this opportunity  
19 to participate in the fact-finding that you are  
20 undertaking. You have an immense challenge ahead  
21 of you and we want to work with you.

22 I'd like to address both the challenge

1 question and the strategy question part of the  
2 question that was introduced. I think one of the  
3 biggest challenges that manufacturers face is the  
4 interoperability of various pieces of the  
5 continuum of the ecosystem for broadband. There  
6 may be certain accessibility features built into  
7 some devices and then they are associated with  
8 other devices or they're associated with an  
9 earlier or later version of a device and the  
10 communication and the testing has not been  
11 sufficient to make sure that all of the  
12 accessibility features are accessible. It's a  
13 continuing challenge because product has  
14 generations to it and it's just the nature of how  
15 we deliver product to the marketplace.

16 So I do think that interoperability is a  
17 very critical issue. It's critical in the  
18 commercial sector and with assistive technology.  
19 It's also -- which we'll talk about a little bit  
20 later. It's also a very important issue with  
21 emergency communications because that's a whole  
22 different interoperability network of public

1 safety.

2 Another issue that is very real for TIA  
3 members is the breadth of the needs, the need to  
4 be covered. It's a very broad continuum of  
5 disability. It's also a depth of disability.  
6 Some people have greater needs than other people  
7 do for accessibility, certain types of  
8 accessibility features and certain types of  
9 assistive technology. So having an understanding  
10 of that breadth is, quite frankly, new learning  
11 for every electrical engineer or software  
12 developer engineer that comes out of any school in  
13 the United States or probably in the world. So,  
14 you're constantly talking about new learning. And  
15 they're learning on the job and they're learning  
16 with deadlines.

17 I think that the industry has gone a  
18 long ways. It also has a long ways to go. There  
19 are also issues of aging. People are working  
20 longer. People are using technology later.  
21 People are coming into aging and the issues of  
22 aging with an increased understanding of lifelong

1 learning. And I think that -- and also being used  
2 for health care applications, which is also a big  
3 issue for broadband.

4           So, while we embrace a point of view of  
5 universal design in a sense that you seek to  
6 incorporate as much as possible, you also run up  
7 against the very real reality that too much is  
8 sometimes -- makes it not user friendly, and the  
9 user experience becomes challenged. So we're  
10 constantly trying to work with that balance.

11           There are certain features on a phone or  
12 a device -- an IT or an ICT device -- that may  
13 provide accessibility very well for one  
14 disability, but not provide it for another  
15 disability or create challenges for accessibility  
16 of another one. A large screen increases the rate  
17 of radio RF interference for hearing aid  
18 compatibility. A smaller screen makes it a lot  
19 easier. Small issues like that that are very  
20 large issues to resolve.

21           There's a lot of specialized work that  
22 is undertaken by both manufacturers and developers

1 to ensure that the diverse range of disabilities  
2 or limitations and the people that need them have  
3 access to the products and services and that the  
4 devices interoperate. We are sometimes doing that  
5 after point-of-sale. A person or an organization  
6 will call and ask I want this. I need this  
7 accessibility. And I think the companies are very  
8 good at trying to figure out how to work that. It  
9 is sometimes a new situation for that person or  
10 products and that information is used to improve  
11 product down the road.

12 So -- and with regard to strategies, I  
13 just wanted to very quickly touch on that. One  
14 strategy that we use is the engagement with  
15 diverse interests. The United States is  
16 interested in this issue. So is Canada,  
17 Australia, Japan, the European Union. And they  
18 have different NGOs, they have different research  
19 initiatives going on. And we really try to work  
20 with all of them because most membership of TIA  
21 has a global market interest.

22 We also work with standards, and we work



1 to include people with disabilities in the  
2 standards development. TIA did this with the  
3 cordless phone and the Wi-Fi -- TIA 1083 standard  
4 -- working with Gallaudet and working with HLAA to  
5 ensure that it worked. We continue to have  
6 collaboration and dialogue, and we also use focus  
7 groups and testing of special populations with  
8 both beta product and with research for solutions.

9 Thank you very much.

10 MS. KING: Thank you, Mary, very much.  
11 We know that everyone in this room and everyone  
12 participating online would like to be able to  
13 offer information about each of these questions,  
14 but we're just not going to be able to take every  
15 opportunity to hear from everyone today. So  
16 please feel free -- and I urge you -- to send us  
17 your ex parte follow-up to the event today.

18 For our next question, Elizabeth.

19 MS. LOVE: Hi. I'm just happy to see  
20 everybody today and I've been detailed to the  
21 Broadband Policy Team to help out with disability  
22 policy issues. I'm interested to hear what you

1 have to say today.

2 The second question is: Is information  
3 about broadband services at the point-of-sale and  
4 product support services afterwards, are they  
5 easily accessible to people with disabilities and  
6 easy to understand in alternative formats  
7 depending on the type of disability?

8 MS. KING: I believe that Verizon is  
9 available. Thank you.

10 MR. KRAMER: Thank you very much. I'm  
11 Jeff Kramer with Verizon Communications, and I'm  
12 very happy to be here today. I've worked with a  
13 lot of people on the FCC staff over the years, as  
14 well as a number of people in this room.

15 These issues are very important to  
16 Verizon, and over the years we've spent a lot of  
17 time and effort to make sure that we can  
18 communicate effectively with the customer in the  
19 language they want to hear.

20 One of the things we do at the  
21 point-of-sale -- we have a Verizon Center for  
22 Customers with Disabilities. It's based on

1 Marlboro, Massachusetts. We have one in  
2 California, as well. But at the VCCD in  
3 Massachusetts we also have American Sign Language  
4 videophone service. So for someone who is deaf  
5 and hard of hearing and American Sign Language is  
6 their primary language, they can have a one-on-one  
7 communication without an interpreter, one-on-one  
8 communication with these customer service reps.

9           Also, we have a number of professional  
10 people in that office who can help the customers  
11 with whatever issues they have. We talked about  
12 some of the issues with equipment. We try to move  
13 -- do whatever possible to lead them in the right  
14 direction to what their state equipment program is  
15 like, how we can help them, provide the devices  
16 they need, whether it's a handheld, whether it's  
17 part of our FiOS product. So we have all -- we  
18 work out of the Verizon Center for Customers with  
19 Disabilities.

20           Also, if you call one of our customer  
21 service centers, clearly not every customer  
22 service representative understands how to deal

1 with someone who has an impairment or disability.  
2 What we try to do is, as I think Jim Tobias  
3 mentioned, we don't -- not everyone identifies  
4 themselves as having a disability. But if they  
5 are willing to do so and talk to us about it, we  
6 do the best we can to bring a service rep out  
7 there, who understands the person they're dealing  
8 with, to make their experience better. So we do  
9 that.

10 Also, as far as some of the -- after the  
11 fact, our website is accessible and it works with  
12 screen readers and all kinds of assistive  
13 technology to make sure that the customers get the  
14 information they need. We also have alternative  
15 form bills and whatever they would do in that  
16 regard.

17 MS. KING: Thank you very much. Does  
18 anyone else have any information to offer us on  
19 that?

20 All right. Greg, would you give us the  
21 next question?

22 Oh, Rebecca. I'm sorry. Hello.

1 MS. LEDEAU: Rebecca Ledeau.

2 MS. KING: How about you use this?

3 MS. LEDEAU: This is Rebecca Ledeau  
4 representing the Speech Liability Community.

5 Rebecca Ledeau, East Coast Liaison.

6 MS. KING: Clip it on instead of holding  
7 it.

8 MS. LEDEAU: Can you hear? You can't  
9 hear me? Can you hear me now?

10 SPEAKER: Yes.

11 MS. LEDEAU: This is Rebecca Ledeau.  
12 Her question is if BlackBerrys are the wave of the  
13 future, what is being done for people with  
14 disability and senior citizens who have trouble  
15 seeing the small keyboard and aren't dexterous  
16 with their hands to operate the keyboard?

17 MS. KING: Thank you for raising that  
18 issue for us, Rebecca. I don't think we're  
19 prepared to answer every question that may arise  
20 today and that issue is certainly one that we know  
21 you will keep in our minds as we move forward.  
22 The issue was raised different equipment

1 accessibility features may not be able to work for  
2 everybody.

3 Greg, would you give us the question --  
4 the next question?

5 MR. HLIBOK: I also think it's worth  
6 mentioning just a very simple fact before I ask  
7 the question. This question is targeted for  
8 consumers, so one thing that I would like for you  
9 guys to keep in mind is that broadband itself --  
10 the Internet in general -- does not discriminate.  
11 You're not -- it doesn't see; it doesn't smell; it  
12 doesn't know; it doesn't hear. So it, itself,  
13 does not discriminate. So it allows anyone to  
14 have anonymity and control of broadband on its  
15 own. It's what we've done to it is the problem.

16 Okay. My question to you is what  
17 challenges are there in today's marketplace? What  
18 needs are unmet or what features are lacking?

19 MS. KING: Rosaline Crawford?

20 MS. CRAWFORD: Good morning. My name is  
21 Rosaline Crawford. I'm with the National  
22 Association of the Deaf. I'm also with the

1 Coalition of Organizations for Accessible  
2 Technology.

3           We have submitted comments; they are on  
4 the record. I think in summary what I'd like to  
5 say is that we -- there's common knowledge out  
6 there that people with disabilities generally are  
7 left out and left behind. And I appreciate the  
8 attempts of the Commission and others to make sure  
9 that that doesn't happen with this particular  
10 broadband deployment issue.

11           And I think that we're looking at not  
12 having specific information. So to the extent  
13 that this effort allows us the opportunity to  
14 gather more specific information about the impact  
15 of broadband on the lives of people with  
16 disabilities -- to actually gather statistics and  
17 information and numbers, you know, across regions  
18 -- not just in rural settings where we know  
19 broadband deployment is a problem, but also in  
20 urban settings as well where we know economics and  
21 employment and other things impact the lives of  
22 people with disabilities and their ability to

1 access affordable broadband services, as well as  
2 assistive technology and the like.

3 I think that general availability of  
4 broadband -- I think people with disabilities have  
5 the same issues as everybody else in terms of  
6 deployment, but our focus tends to be on  
7 accessibility which as already been discussed and  
8 affordability. And as to affordability, I do want  
9 to emphasize that we do need to have programs in  
10 place, not only to make assistive technology  
11 affordable, but also to make general basic  
12 broadband services affordable to people with  
13 disabilities. Common knowledge again that people  
14 with disabilities are underemployed and unemployed  
15 at rates significantly higher than that in the  
16 general population. So to the extent that the  
17 Commission and these efforts will make funding  
18 available to make sure that everybody can afford  
19 broadband services, I think that's critical.

20 MR. LEVIN: Can I ask a specific  
21 question on that?

22 MS. CRAWFORD: Sure.



1           MR. LEVIN: Are there programs or  
2 revenue streams that go to specifically job  
3 training and job placement for that community that  
4 perhaps we should look at in terms of directing  
5 part of that revenue stream to pay for broadband?  
6 For example, if there are funds that are available  
7 -- and I'm not an expert in the field -- that are  
8 fundamentally designed to help, and if there are,  
9 for example, job training on the Internet -- and  
10 that's -- increasingly job training is moving  
11 online -- should we -- are there rules that maybe  
12 it's the Department of Labor, maybe it's in other  
13 places, are there very specific things that we can  
14 change so that some of the money that is going to  
15 those efforts actually pays for broadband which  
16 would enable a result that is better for everyone?

17           MS. CRAWFORD: To answer -- this is  
18 Rosaline, again. To answer your question, I think  
19 that everybody perceives a shortage of funds  
20 everywhere, quite frankly.

21           MR. LEVIN: As do we here at the FCC.  
22 We're not alone.

1 MS. CRAWFORD: Right. So we look at  
2 some fairly traditional programs like vocational  
3 rehabilitation.

4 MR. LEVIN: Right.

5 MS. CRAWFORD: Which would provide that  
6 kind of training. It doesn't necessarily or  
7 usually, I don't think, provide access to  
8 broadband, the broadband services in the  
9 individual's home, for example, although they  
10 could. But vocational rehabilitation services and  
11 the funding for that, both federal and state, are  
12 completely insufficient. Completely insufficient  
13 today to meet those kinds of needs. And I think  
14 that the community is really looking at the  
15 funding that was made available through this  
16 effort to specifically fund training and outreach  
17 and education, as well as making the services  
18 available and affordable to people with  
19 disabilities. I think we are looking at tapping  
20 into these funds and making sure that these funds  
21 are used.

22 MR. LEVIN: But when you say "these

1 funds" you mean --

2 MS. CRAWFORD: The Broadband Deployment  
3 Funds. The 9 billion or whatever we're working  
4 with.

5 MR. LEVIN: Oh, you're talking about the  
6 funds that are at NTIA.

7 MS. CRAWFORD: Yes. Yes.

8 MR. LEVIN: I just want to be clear.  
9 And that's NTIA and that's a different program.  
10 We obviously are going to be very conscious as we  
11 design the plan about what they're doing and, you  
12 know, there will be a lot of back and forth on  
13 that. But as we're developing the plan, we don't  
14 have a bucket of funds that we're -- that we will  
15 be providing grants to. I mean, part of it is to  
16 try to figure out what can be done most  
17 efficiently.

18 MS. CRAWFORD: I appreciate that  
19 response, and I hope that in this process you will  
20 be including that kind of guidance to NTIA and  
21 others. Certainly, we have submitted comments to  
22 NTIA on the issue of the RFP process, as well.

1 MR. LEVIN: Right.

2 MS. CRAWFORD: To include people with  
3 disabilities and accessibility and affordability,  
4 as well as education outreach and training.

5 MR. LEVIN: But to a certain extent my  
6 question is from the perspective of the  
7 individual, the consumer. Admittedly, there  
8 aren't sufficient funds. We'll start from there.  
9 But if someone is receiving a bucket of money,  
10 would that person be better off if one eligible  
11 use was for broadband access? Because that would  
12 then provide access to lots of other things that  
13 really would open the door and unleash the  
14 potential here. That's part -- that's really my  
15 question. From their perspective, how do we get  
16 the best result with that revenue stream?

17 MS. CRAWFORD: Rosaline, again. We  
18 agree. For example, we have submitted a request  
19 to the FCC to allow people who are eligible for  
20 Lifeline and Link-Up funds through Universal  
21 Service to be able to use those funds and apply  
22 them to broadband access to help defray the cost

1 of broadband. To have the choice between -- using  
2 the same amount of funds -- you know, to choose  
3 regular PSTN phone line service or Internet  
4 service, you know, broadband service. And we hope  
5 that action can be taken swiftly on that.

6 But, yes, I think you're right. Just  
7 allowing individuals to have some choice in how  
8 those -- that available pot of money is available,  
9 how it's used, I think that would be really  
10 helpful. But we are looking for additional funds,  
11 as well. I'm not going to lie to you.

12 MR. LEVIN: Yeah, I know.

13 MS. KING: Thank you, Rosaline. Is  
14 there anyone else? Karen?

15 MS. PELTZ STRAUSS: Hi. I'm short. I'm  
16 Karen Peltz Strauss and I'm also with the  
17 Coalition of Organizations for Accessible  
18 Technology and with Communication Service for the  
19 Deaf.

20 And Rosaline actually answered what I  
21 was raising my hand for, the Lifeline Link-Up  
22 program to be used to give people an opportunity

1 to use those funds for broadband. But we also  
2 have actually asked for money from the program to  
3 be used for a novel purpose, which is actually for  
4 equipment for people who are deaf-blind.

5 Typically, we know that Lifeline and  
6 Link-Up have not been used for equipment purposes.  
7 USF generally hasn't been used for equipment  
8 purposes. But I want to speak to this particular  
9 population who has virtually been completely left  
10 out of the discourse on most telecommunications  
11 and information technology discussions. It's a  
12 population that is about -- well, the numbers  
13 vary, but approximately 100,000 people. It  
14 depends on how much vision loss and how much  
15 hearing loss each person has. And the cost of  
16 equipment for these people runs anywhere from  
17 \$5,000 to \$10,000. So what we've asked for,  
18 actually of the FCC and Congress, is that money be  
19 set aside. And again, it could come from the USF  
20 fund specifically to help fund equipment for these  
21 individuals.

22 I also wanted to respond a little bit

1 more to Greg's question which was basically what's  
2 wrong? What are the barriers? There are a lot of  
3 barriers. I think that Rebecca pointed out one,  
4 which is that there are a lot of pieces of  
5 broadband -- broadband equipment and multimedia  
6 applications -- that require certain vision,  
7 hearing, dexterity to manipulate functions and  
8 controls. And these create barriers for people  
9 who don't have these abilities.

10           Additionally, the proliferation of  
11 graphical interfaces and web content that still is  
12 not accessible to screen readers, a huge problem.  
13 It goes on. It's part of what Greg was talking  
14 about, how originally everything was text-based  
15 and these were accessible to screen readers, and  
16 now graphical interfaces and many web programs are  
17 not. Website designs have failed to incorporate  
18 web accessibility standards, and then there's just  
19 sometimes basic non- inclusion of access, like  
20 videos that just don't have captioning put into  
21 them or video description that's left out.

22           And then there's also physical barriers,

1 but I'm not going to go into that now. I'll wait  
2 for possibly later. But I just wanted to comment  
3 that there are huge barriers that still exist.

4 Another barrier is being able to  
5 retrieve messages from the Internet, retrieve  
6 e-mail messages or retrieve information if you're  
7 blind. Because it's not accessible on your  
8 device, you can't have -- there's no audio  
9 interfaces on many cell phones or PDAs.

10 Thank you.

11 MS. KING: Thank you, Karen. The next  
12 question that we had prepared is: How should use  
13 of broadband by persons with disabilities be  
14 measured? And what are the indicators and the  
15 benchmarks that can be recognized as relevant to  
16 increasing broadband use and improving outcomes  
17 for people with disabilities through the use of  
18 broadband?

19 We specifically want to hear from the  
20 academics and the economists, but we also have a  
21 question further in our list that is even more  
22 expansive of how do we integrate those benchmarks



1 and indicators into the National Broadband Plan,  
2 either in actuality or in implementation?

3 And so I'd like to briefly touch on it  
4 here and then we'll move on and pick it up again  
5 later. We do need to speed ourselves up a little  
6 bit or we're going to run out of time. So, I  
7 believe Larry Goldberg has had an opportunity to  
8 consider this question. Larry, are you online?

9 MR. GOLDBERG: I am. Can you hear me?

10 MS. KING: I can, Larry. Thank you so  
11 much.

12 MR. GOLDBERG: Great. Well, if you want  
13 to talk about benchmarking, it's an issue that's  
14 always been a difficult one to deal with in the  
15 world of disabilities. As you've heard Jim Tobias  
16 earlier say, it is not -- the largest portion of  
17 people with disabilities are not self-identifying  
18 as such. And whenever industry or government is  
19 looking to either indicate for census reasons or  
20 for market measures, it's a very difficult thing  
21 to do because so many people aren't even using the  
22 available accessible technologies that are in

1 their hands today right built into their existing  
2 systems. And then to try to encourage industry  
3 activity based on proven effects on bottom-line is  
4 just as hard, especially in a regulatory  
5 environment where basically everyone is told to  
6 make some feature or service accessible.

7           You can't gain a competitive advantage  
8 when basically all of your competitors must do it.  
9 But that, in fact, is the way it would really have  
10 to be done so no one has a competitive  
11 disadvantage.

12           But network-based services will help  
13 solve some of these issues, and then perhaps the  
14 measurement will become less dire or less germane  
15 when everyone can be served equally at the same  
16 time. What needs to be created, obviously, is  
17 some sort of marketplace or resource allocation so  
18 that accessibility can be provided at all times to  
19 all people through cloud computing, through  
20 network-based services.

21           And that's just a brief answer to that  
22 particular point.

1 MS. KING: Thank you, Larry. Elizabeth,  
2 would you pose our next question for us?

3 MS. LOVE: Is it possible to prepare a  
4 list of the accessibility issues related to  
5 broadband services, equipment, networks, and  
6 software that are your biggest concerns? Are  
7 there specific concerns about the affordability of  
8 broadband separate from issues about accessibility  
9 of hardware and software as it relates to  
10 individuals with disabilities?

11 And let me say I know that's a really  
12 broad question and we have a limited amount of  
13 time, so we're just really talking about if anyone  
14 wants to give us sort of a big picture flag view  
15 of things, that's what we're looking for. Thanks.

16 MS. KING: Would someone like to help us  
17 with that question? Mary Brooner?

18 MS. BROONER: I'm Mary Brooner with TIA.  
19 To answer the question of sort of biggest concerns  
20 that the industry has, as I mentioned earlier, the  
21 interoperability across the broadband ecosystem  
22 remains a huge priority issue for us. And it

1 concerns us a great deal.

2 Another really important issue is the  
3 assistive technology ecosystem and the need for a  
4 range of choice and a range of interoperability  
5 with assistive technology. And I would say that  
6 the ICT industry has been working for a number of  
7 years to develop relationships with the AT  
8 assistive technology vendors. And we recognize  
9 that assistive technology can be expensive. One  
10 of the things that the ICT industry is trying to  
11 do is to figure out how we could work with the AT  
12 so that we can bring down the cost of the AT over  
13 time. There's still -- in our perception and  
14 point of view there's still a need for assistive  
15 technology, but how we work on both bringing down  
16 the affordability and increasing the  
17 interoperability are the challenges that we're  
18 looking at.

19 So, for example, TIA right now has a  
20 project in our working group with the mobile  
21 device manufacturers to look at Bluetooth  
22 connectivity for mobile devices with AT, which

1 would increase both the user -- would increase the  
2 user experience by having it be wireless, but also  
3 to come up with a uniform Bluetooth way that the  
4 various AT equipment can work with the mobile  
5 device. From our point of view, sometimes the  
6 amount of battery power or complexity of the  
7 assistive technology device does not really align  
8 itself to be incorporated into the device itself.

9 So those are a couple of ideas that  
10 we're looking at. Thank you.

11 MS. KING: Thank you, Mary. Jim  
12 Fruchterman, are you available? Jim, are you on  
13 the phone bridge?

14 MR. FRUCHTERMAN: Indeed, I am. Is this  
15 working?

16 MS. KING: Yes, Jim. Welcome.

17 MR. FRUCHTERMAN: Great, this is Jim  
18 Fruchterman of Benetech. We're a deliberately  
19 non-profit high-tech company based in Silicon  
20 Valley. And we've been developing assistive  
21 technology for people with disabilities,  
22 especially visual and learning disabilities for

1 the last 20 years.

2 I think the comments I want to address  
3 kind of build off of both Mary's and Greg  
4 Vanderheiden's comments. I think that as an  
5 engineer in Silicone Valley, we see that people  
6 with disabilities tend to lag 10 to 20 years  
7 behind sort of the technology that's available to  
8 everybody else. And so in many cases we can see  
9 the future for people with disabilities by simply  
10 looking at the last three to five years of what  
11 everyone else has been getting.

12 And so we think in terms of developing  
13 additional choices so that we've effectively  
14 raised the floors as Greg talks about it. It's a  
15 real problem when everybody else can buy a PC for  
16 \$300 or \$400 that works great and a person with  
17 certain disabilities has to spend \$1,500 to get to  
18 the same level of access. And so we see this on a  
19 spectrum from device to application to I'll call  
20 it browser-based or web- based sort of access.  
21 And just like someone who can't afford Microsoft  
22 Word can get essentially Google applications for

1 free through their browser, we see this playing  
2 out in the accessibility area, not to replace the  
3 dedicated, say, Braille display because you're not  
4 going to have a Braille display built into a cell  
5 phone or into a standard PC, but to give people a  
6 range of options so that people who don't have a  
7 lot of funding aren't locked out.

8           And the key to realizing that vision is  
9 the interoperability question that Mary talks  
10 about and I think of it as an openness question.  
11 When you get people developing closed systems that  
12 don't interoperate, that don't allow assistive  
13 technology vendors to make something accessible,  
14 that's when people with disabilities are most let  
15 out, most let down, most locked out of the  
16 opportunities that the technology builds in. And  
17 I think the issue that we're working on a lot is  
18 the Kindle, this great wireless device that's a  
19 dream machine for book accessibility that Amazon  
20 knew was inaccessible three or four years ago and  
21 just didn't get around to doing anything. And now  
22 they're going to do something because the National

1 Federation of the Blind is going to sue them.

2           How can we create an environment where  
3 that openness is there so that we can develop all  
4 these different sorts of applications? And I'm  
5 going to give just one specific example. A lot of  
6 people with disabilities who can afford them have  
7 screen readers. They work great. We operate  
8 Bookshare, which is a national digital library for  
9 people with print disabilities. And we support  
10 every kind of assistive technology across that  
11 entire spectrum, from Braille displays to  
12 dedicated applications like screen readers and  
13 DAISY Book Readers to where we'll be launching  
14 with Mozilla, the people who make Firefox, a free  
15 plug-in that will have its own voice if you don't  
16 happen to have your own voice. It'll just work in  
17 a browser for free or if you have AT it will work  
18 great.

19           So I think what we need to do as we roll  
20 out more of this broadband is to see the people  
21 with disabilities actually get access to that by  
22 encouraging this openness and interoperability



1 that gives the assistive technology industry the  
2 ability to innovate across this entire spectrum.

3 MS. KING: Jim, thank you so much.  
4 We've gone through a series of questions now  
5 focusing on the broadband marketplace today for  
6 individuals with disabilities. Before we move  
7 into the next section of questions, I have the  
8 privilege and the honor of introducing Ms. Marcie  
9 Roth to give us a few remarks.

10 To most of you in the audience, it's  
11 probably a very familiar name, Marcie Roth. She's  
12 formerly with the Spinal Cord Injury Association  
13 of America and very active in disability issues.  
14 I first came to know her after Katrina when we  
15 were working on emergency preparedness and  
16 response and recovery efforts for people with  
17 disabilities. Marcie now is the first political  
18 appointment to FEMA for disability issues, and  
19 it's my pleasure to introduce my friend, Marcie  
20 Roth.

21 MS. ROTH: Thank you, Cheryl, for that  
22 warm welcome. I really appreciate it, and I

1 really appreciate the opportunity to make some  
2 remarks here today.

3 I've had the pleasure of working with  
4 Cheryl and the FCC team for many years, back in  
5 the day when I was working in the private sector  
6 -- six weeks ago and before that. It does seem  
7 like a lifetime ago.

8 I've appreciated the work that the FCC  
9 has done on addressing the communications-related  
10 emergency management issues facing people with  
11 disabilities and communities committed to meeting  
12 the emergency and disaster-related needs of their  
13 citizens. I'm pleased that in my new role I can  
14 join the FCC on the Interagency Coordinating  
15 Council on Emergency Management and People With  
16 Disabilities.

17 Broadband is important to all of us, but  
18 for a person with a disability the impact can be  
19 truly life altering. For all Americans, broadband  
20 will increase employment opportunities, but for  
21 some with mobility, vision, or other disabilities,  
22 broadband may provide the only opportunity for

1 employment. A person with a mobility, vision,  
2 hearing, speech, intellectual, or other  
3 disability, can surf the web, hold down a job that  
4 today without broadband would be impossible or  
5 very difficult. And through the Internet, people  
6 with disabilities are less isolated. They can  
7 engage in social networking, mentoring, visiting  
8 museums, federal parks, other places that were  
9 formerly beyond their reach. And for people with  
10 disabilities, access to broadband may be vital to  
11 increasing personal preparedness by expanding  
12 access to information, resources, and tools to  
13 meet complex needs in emergencies and disasters.

14 The Federal Emergency Management Agency  
15 joins with the rest of our federal partners in  
16 encouraging acceleration in the deployment of  
17 broadband for many reasons. One important reason  
18 is to achieve truly interoperable communications  
19 in times of emergencies and disasters. With  
20 nationwide broadband deployment and access, we can  
21 realize that many benefits of a NG 911 system, the  
22 next generation of 911 emergency calling. With NG

1 911, as it is currently being envisioned, every  
2 American will be able to directly and personally  
3 contact a 911 call center using voice, text,  
4 speech, and video.

5           Some examples: A deaf person will be  
6 able to call 911 directly and have the 911 call  
7 taker immediately punch in a video remote  
8 interpreter just like they do today for a caller  
9 who speaks Chinese, Spanish, Russian, or just  
10 about any other language here in the U.S. A child  
11 with a communication disability, autism, or an  
12 intellectual disability can call 911 directly to  
13 reach help when a parent or a family member has  
14 become ill or injured. A person who is blind will  
15 be able to call a 911 center over video, and the  
16 911 call taker might see a fire, an injured  
17 person, or another emergency situation in the  
18 background immediately and dispatch emergency  
19 services.

20           Access to broadband will also increase  
21 communication during emergency evacuations and  
22 sheltering adding options for access to sign

1 language interpreters, locating accessible  
2 shelters and temporary housing, and providing  
3 access to information that will enable children  
4 and adults with disabilities to preserve their  
5 independence and prevent secondary health  
6 conditions by connecting them with subject matter  
7 experts and expanding solutions to immediate  
8 problems.

9 We know from past experience that it  
10 will be critical to consider accessibility issues  
11 in the early stages of developing next generation  
12 emergency networks. So I want to hear what the  
13 audience has to tell us about the current state of  
14 accessibility and give us some insight into what  
15 the broadband future holds. I want to learn what  
16 the Federal Government's National Broadband Plan  
17 can do to facilitate the use of broadband and  
18 broadband Internet access for people with  
19 disabilities, especially to meet the emergency  
20 management needs of the 56.4 million Americans  
21 with disabilities.

22 Thank you.

1 MS. KING: Thank you, Marcie, very much.  
2 All right. Let's move into our second area for  
3 broadband potential for individuals with  
4 disabilities. Greg, again, would you give us the  
5 first question?

6 MR. HLIBOK: Sure. Our next question.  
7 Are there any major technical advances on the  
8 horizon that will drive increased use of broadband  
9 by people with disabilities? Are there minor ones  
10 on the horizon, as well?

11 And I believe Larry Goldberg is on the  
12 phone and would like to make a comment in regards  
13 to that question.

14 MR. GOLDBERG: Thank you, Greg. Larry  
15 here. If I wasn't introduced earlier. I am with  
16 WGBH in Boston, with Media Access Group here at  
17 the National Center for Accessible Media.

18 I guess I hate to start with a negative,  
19 but before anyone jumps on the hoped for future of  
20 network-based automatic speech recognition so that  
21 any broadband service that has audio can  
22 automatically be turned into comprehensible

1       instantaneous captioned text, we're just not there  
2       yet.

3               So I almost see that question built into  
4       this question. It will be there. I'm sure most  
5       of you have heard Vince Surf say before that  
6       automatic speech recognition for this kind of use  
7       is five years away and will always be five years  
8       away. And maybe these days it's less than that,  
9       but will always be slightly in our distant future.

10              But, in fact, there are, obviously, yes,  
11       many excellent potential network-based services,  
12       including forms of speech recognition, including  
13       forms of access for blind folks and all kinds of  
14       helpful things. The marketplace is small. I  
15       think we need to recognize that. And in fact,  
16       we're always grappling with the issue of having a  
17       low disability, low numbers that won't bring on  
18       board the kind of major operators who want to see  
19       an immediate return on their investment. So I  
20       think we will need to look for government support  
21       and government investment the way Rosaline  
22       Crawford had mentioned looking for contributions

1 from the Universal Service Fund and the Link-Up to  
2 help drive those kinds of network-based services  
3 for people with disabilities. If they're not  
4 going to be automatically built into every kind of  
5 multimedia that does exist, then some support from  
6 the federal government could be useful.

7 At the same time, we, I think, recognize  
8 that there already are significant amounts of, for  
9 example, captioned video that has been made  
10 available through the FCC's broadcast cable and  
11 satellite rules that could be relatively  
12 straightforwardly transferred into web-based  
13 captioned and accessible media. And at the same  
14 time, as soon as we see a reinstatement of the  
15 FCC's video description rules which we're hoping  
16 to see in the near future, those same video  
17 descriptions can be repurposed for web-based  
18 media.

19 Broadband, obviously, has great promise  
20 for emergencies as Marcie noted; for education as  
21 we heard before; for vocational training. But we  
22 also know that a lot of people love their



1 broadband for the ability to have access to social  
2 media and entertainment. And that's where I think  
3 we'll see a huge gap until we see more direct  
4 support for making broadband entertainment and  
5 media more accessible. The bill introduced by  
6 Congressman Markey HR3101 goes somewhat distance  
7 down that road, but does not address the larger  
8 world of the YouTube-type user-generated content,  
9 which still will require some interesting  
10 innovations around social network-based production  
11 and creation of accessible broadband media. Those  
12 are a little bit more on the distant horizon, but  
13 I wouldn't call any of them minor ones.

14 MS. KING: Great. Thank you so much.

15 MR. LEVIN: Can I just ask a follow-up?

16 MS. KING: Sure. Blair?

17 MR. LEVIN: Yes. On the question of the  
18 automatic speech recognition, why is it always  
19 five years away? Is there a basic science issue?  
20 Is it an engineering issue? Is it -- I wouldn't  
21 think it would be a market size issue?

22 MR. GOLDBERG: No. The market is

1 virtually everyone on the planet, so it's not a  
2 market size issue.

3           For decades now, many major corporations  
4 have been hungry to conquer this problem,  
5 particularly throughout Asia where keyboarding is  
6 so difficult. Every major high-tech company would  
7 love to have instantaneous speech recognition that  
8 is speaker independent, large vocabulary with a  
9 high degree of accuracy, which is our key issue,  
10 as well as instant translation. Today, many of us  
11 are watching these proceedings on the web and  
12 we're watching speech to text technology using  
13 court reporters. And today, and for a while, we  
14 will continue to rely on that being the best  
15 potential way. It is an engineering and science  
16 issue. Basically, it comes down to the NIST and  
17 many other companies have been working very hard  
18 -- IBM -- to give us what we would want to have as  
19 a chip just built right into the technology. And  
20 it's a very difficult engineering trick that has  
21 yet to be conquered.

22           MS. KING: Thank you, Larry. Helena, do

1 you have something to offer? Please introduce  
2 yourself.

3 MS. MITCHELL: Good morning. My name is  
4 Helena Mitchell, and I'm with the Rehabilitation  
5 Engineering Research Center for Wireless  
6 Technologies out of Georgia Tech. And we are  
7 working very heavily in the area of wireless  
8 emergency communications.

9 And I just want to say a few points.  
10 What Marcie brought up as far as the importance of  
11 emergency communications cannot be emphasized  
12 enough. We have been, for the last three years,  
13 doing a lot of experimental projects working with  
14 focus groups and working with industry to come up  
15 with solutions on how broadband can be used to  
16 more completely integrate everything.

17 And we have several ideas for where the  
18 potentials are. And one of our main potentials  
19 has been the fact that we've been able to get  
20 academia, government, and industry as partners.  
21 And this has greatly reduced the cost of what it  
22 would have done for anyone of us and also the

1 timeline because obviously industry is on a faster  
2 track and they want solutions quicker. But we've  
3 been very fortunate.

4 Also, we've had numerous focus groups  
5 working with people with different types of  
6 disabilities, and we've done everything from ASL  
7 to message tool boxes, so if an emergency happens  
8 they can go down to different levels to figure out  
9 whether they should evacuate or stay in place.

10 So we think there's a lot of solutions.  
11 But broadband is one of the keys because if you  
12 don't have a wider pipe and you don't have an  
13 ability to get that information out, then it's not  
14 going to really be helpful in the long run. And  
15 also the Universal Service Fund, we believe, is  
16 another way of being able to try to bring some  
17 resources into the pot because with the ability of  
18 the Universal Service Fund you just have to drop  
19 in the word broadband and that solves a lot of our  
20 problems.

21 And also, the interoperability issue, of  
22 course, is critical.

1 MS. KING: Thank you so much, Helena.  
2 Elizabeth, can you give us the next question?

3 MS. LOVE: Sure. What applications and  
4 features of broadband are most important to people  
5 with disabilities?

6 What are the specific opportunities  
7 related to such areas as education, employment,  
8 health care, public safety, and other areas for  
9 people with disabilities? And again, another  
10 broad question. So if you want to highlight  
11 something that might be a little unusual or  
12 different that would be useful.

13 MS. KING: And not only that, we don't  
14 have to be repetitive. Tell us something that we  
15 haven't heard yet. Who -- Jim?

16 MR. FRUCHTERMAN: Which Jim? Are you  
17 asking for Jim Fruchterman or a different Jim?

18 MR. HOUSE: Just a moment. Okay. If  
19 you can follow me that would be great.

20 My name is Jim House and I am from  
21 Telecommunications for the Deaf and Hard of  
22 Hearing. I want to thank you for the opportunity

1 I have to address the issues about the needs that  
2 we have in broadband in that environment.

3           There are several possibilities, and,  
4 frankly, the answer will depend on who you ask.  
5 The education piece is there for distance learning  
6 to virtual classrooms, and any kind of media  
7 that's used in those classrooms, be that  
8 PowerPoint, video, these things have to contain  
9 closed captioning and video description. Also,  
10 for employment, telework. People will be able to  
11 still stay in contact with their co-workers and  
12 for customers -- people with whom you are doing  
13 business, health care, telemedicine -- when you  
14 need to speak with your physician or mental health  
15 counselors. There are very, very few folks in  
16 that field who are competent in sign language.  
17 And frankly, receiving mental health services  
18 through an interpreter is inadequate.

19           It's far better to do it directly. And  
20 broadband is a solution for that because it really  
21 doesn't matter where the patient is.

22           Also, for e-911 one can have an

1 interpreter and an e-911 operator at the same time  
2 so they can know what's happening in real time.  
3 There's no three-way video capability like you  
4 have, say, with an IM chat. You could invite more  
5 than two people in on a chat in text, but as --  
6 heretofore, it's not able to do in video.

7 I think that's it.

8 MS. KING: Thank you, Jim. Next we have  
9 someone else. Yanina?

10 MS. SYCA: Thank you for the opportunity  
11 in this hearing. It's, frankly, very exciting  
12 stuff to be thinking in terms of the future ahead  
13 of it actually show up as, I think, Greg said  
14 early on.

15 MS. KING: Would you introduce yourself,  
16 please?

17 MS. SYCA: It's important that we build  
18 an accessibility --

19 MS. KING: Introduce yourself again.

20 MS. SYCA: -- ahead of the deployment  
21 and not after the fact.

22 I'm Yanina Syca. I'm here really

1 representing myself today. I'm a consumer. I'm  
2 blind. I use this stuff.

3 I know it changes lives when we get it  
4 right because I'm living proof of that and I'm  
5 sure there are many other people in this room that  
6 would tell you the same story.

7 I've also worked in this area  
8 professionally for many years. I chair two  
9 committees today actively: Open Accessibility  
10 Committee in the Lenox Foundation, and also the  
11 Protocols and Formats Committee in the Worldwide  
12 Web Consortium, where we write the kinds of  
13 specifications, the consensus industry  
14 specifications, that allow assistive technologies  
15 to interface to all of these applications that  
16 show up on broadband connections.

17 So, my answer to this question is really  
18 a very simple one, both from the personal  
19 viewpoint and from this professional viewpoint  
20 about what it takes to make them work.

21 I think what we need is access to  
22 exactly the same things that the rest of the world



1 is going to be accessing over broadband. No more  
2 and no less. And the good news on that is we do  
3 really know how to achieve that pretty much. I  
4 won't say we know everything we need to know, but  
5 we do know a lot. We have many years of  
6 background and experience to know what it takes,  
7 and it takes two sides. Just as a conversation  
8 takes two people, a broadband connection is at  
9 least two, perhaps more. There's me with my  
10 assistive technology accessing the net and the  
11 broadband connection really is quite neutral. All  
12 it does is connects me somewhere. And what that  
13 somewhere is might be a hotel site, might be an  
14 airline reservation, might be just my intent to  
15 get on the net, which I tried to do in a Midwest  
16 U.S. city last week. I was in this city. They  
17 have citywide wireless there. I got online with  
18 my assistive technology device. I saw the price  
19 is great. Let me buy a day's worth of access.

20            Couldn't put in my credit card. Why?  
21 Because that part of the interface -- that part of  
22 their service had been written in a way which did

1 not comply with standards.

2           So, the bottom-line here is we're not  
3 going to get it if we ask for it to be incidental  
4 -- if we ask for it to happen by chance. It's  
5 time we realized that bits and bytes are  
6 architected to create the broadband environment  
7 ever as much as this building was architected. If  
8 we want accessibility in the broadband  
9 environment, we need to require it. We need that  
10 to be part of the requirements that are considered  
11 when the engineering specifications are written,  
12 otherwise nobody is going to sit down to make sure  
13 that they design and build it in a way that's  
14 accessible or test for whether they got it right  
15 or not.

16           So, we do need specialized services  
17 because we have disabilities, but what we really  
18 need is access to the things that everybody else  
19 uses -- the applications, the business, the public  
20 accommodations, things that all of us -- the  
21 entertainment that all of us are going to use on  
22 the web.

1           And let me throw in one additional here  
2 because it's directly applicable and I think it  
3 needs to be explored by this community. And that  
4 is Internet Protocol version 6.

5           There is a lot of potential for creative  
6 new delivery of services, particularly to that  
7 majority of people with disabilities who come to  
8 it adventitiously. You know, it's been said that  
9 the surest way in this world to get a disability  
10 is to live long enough. Most of those people are  
11 probably not going to be ready to learn a lot and  
12 are probably going to need more assistance.

13           I think of my 98-year-old mother in  
14 Minneapolis in a nursing home today. There are  
15 things I could do for her if I could reach through  
16 the wire into her room and operate her devices. I  
17 do that for my own devices. I can sit halfway  
18 around the planet and operate most of the  
19 electronic devices in my home because I connect  
20 through broadband. And, you know, I've got all  
21 kinds of good things that I can manage and tweak  
22 and make do things remotely. I'd like to be able

1 to do it for her. I'd like a service agency to be  
2 able to do it for her. I'd like to think that we  
3 have a future where we don't have to be physically  
4 present always in order to assist someone with a  
5 disability in a very small, but very meaningful  
6 way because they can't do that for themselves.  
7 And we need to get off of the IPv4 environment in  
8 order to be able to do that securely. And yes,  
9 we're going to need to solve privacy issues in  
10 order to make that happen, but there is enormous  
11 possibility there.

12 So those two things. It's intentional,  
13 whether it's bricks or mortar. We're only going  
14 to get accessibility if we require it. It's the  
15 same as for anything else. If it's not in the  
16 list, you can't do it.

17 MS. KING: Thank you so much, Yanina.  
18 Thank you very much. Thank you.

19 MS. LEDEAU: Rebecca Ledeau, East Coast  
20 Liaison, Speech Communication Assistance by  
21 Telephone, Incorporated.

22 We want the TRS community to know how

1 important it is for the providers to conduct  
2 trials for video assistance, speech-to-speech,  
3 VAS. VAS will allow users to call the relay from  
4 a website. The user and the CA will be able to  
5 see each other, and the CA would make phone calls  
6 just as they do with video relay. There are  
7 perhaps a million people in the United States with  
8 speech disabilities so severe that they can only  
9 be understood when their faces are visible.  
10 Obviously, these people are not able to use  
11 speech-to-speech.

12 Many of these people have dexterity  
13 disabilities which make it impossible for them to  
14 use a telephone. Because of adaptive equipment,  
15 they can use a computer. VAS facilitates  
16 telephone access for people who use speech  
17 generating devices because the CA can see the slow  
18 data entry and can be patient with the user.

19 Bob Sieverman tells me that he is a  
20 regular user of VAS because, like many other older  
21 adults with cerebral palsy, his voice is becoming  
22 too soft for the CAs on STS to hear. When trials

1 are done, they should be supervised by speech  
2 language pathologists who are experienced in  
3 working with people who use speech generating  
4 devices.

5 MS. KING: Thank you so much, Rebecca.  
6 That's excellent information for us. Thank you.

7 We're going to jump ahead. We're going  
8 to jump over a couple of questions because we've  
9 already touched on the issues. We'd like to move  
10 to what we have our number 10 question. And  
11 Elizabeth, will you raise that to the audience,  
12 please?

13 MS. LOVE: Sure. What general  
14 suggestions do you have in terms of what should be  
15 included in the National Broadband Plan to  
16 facilitate and promote the use of broadband by  
17 people with disabilities? Are there particular  
18 benchmarks and indicators for increased use of  
19 broadband by people with disabilities that should  
20 be incorporated into the National Broadband Plan?  
21 Are you aware of any recent data on broadband  
22 penetration as it relates to people with

1 disabilities? How should the Commission define  
2 broadband in a way to ensure universal access and  
3 use by people with disabilities?

4 MS. KING: Kelby, would you like to  
5 offer some information on that one? Please  
6 introduce yourself. Introduce yourself.

7 MS. BRICK: Thank you. My name is Kelby  
8 Brick from Purple Communications.

9 One thing that I strongly believe is  
10 that the FCC's Broadband Policy must include a  
11 specific definition for minimum broadband. In  
12 other words, one of the definitions that should be  
13 addressed is that broadband should enable two- way  
14 live video communication so that folks --  
15 understand that broadband is only a one-way  
16 communication right now for many folks and we need  
17 two-way live video communication. I think it's  
18 critical for individuals with disabilities,  
19 specifically for those who are deaf and hard of  
20 hearing, to have full access to the national  
21 telecommunications network.

22 Going back to a question that came from

1 Greg Hlibok earlier about what new technology is  
2 on the horizon, there is quite a bit of new  
3 technology that's ready to be deployed into the  
4 marketplace at any moment. One big holdup is that  
5 the current national network is not two-way  
6 broadband. It is really one-way, as I explained  
7 before. It's only a downstream environment right  
8 now and we must have about 384 kilobytes for each  
9 direction in the two-way communication per  
10 individual. And that's one specific area that I  
11 believe the FCC can address in their policy.

12 While I'm here I'd like to address  
13 another question about how we can measure  
14 broadband penetration. One way to do that right  
15 now -- a quick way to do that right now is to look  
16 at the number of registered users for Internet-  
17 based telecommunication services and look in that  
18 database. There are many people who have already  
19 registered. Deaf and hard of hearing individuals,  
20 as well as those with speech disabilities who use  
21 Internet-based TRS, must register right now with a  
22 relay provider. That number that they receive --



1 the 10-digit number that they receive is replaced  
2 in the database. That way you can see how many  
3 have already registered and compare that with just  
4 the general population.

5 I think that the number is very, very  
6 small, but I think it will give you a good way to  
7 right now do a quick measurement of the  
8 penetration rate for broadband.

9 Thank you.

10 MS. KING: Very good information, Kelby.  
11 Thank you.

12 Do we have anyone else who would like to  
13 -- Jennifer? Please introduce yourself to all of  
14 us who know you.

15 MS. SIMPSON: Hi. I'm Jennifer Simpson.  
16 I'm with the American Association of People with  
17 Disabilities. Thank you very much for having  
18 this. I think it's very good to focus on this  
19 particular issue within the broadband arena.

20 I'm particularly here to address the  
21 question around the strategies by which we want to  
22 incorporate people with disabilities in the

1 broadband arena. And I think this requires that  
2 we have to look at this from the point of view of  
3 an overarching principle of inclusion. That's a  
4 very specific inclusion that would include people  
5 with disabilities. So as you write the National  
6 Plan here at the FCC and you send it through the  
7 Congress, you have to be very specific when you  
8 say what you mean by inclusion for people with  
9 disabilities. In other words, you have to have  
10 that written out exactly that way or it will not  
11 occur. I mean, every single example we have heard  
12 here today has been something happened here,  
13 something happened there. We've heard about  
14 standards. We've heard about industry issues.  
15 We've heard about consumer issues. We've heard a  
16 range of places where it can happen, doesn't  
17 happen, sometimes there's barriers, sometimes  
18 there's difficulties.

19 We've had requirements for disability  
20 accessibility in the Communications Act for quite  
21 some time now. We have a long history of this,  
22 but we do not have an overarching principle in

1 this nation for a National Broadband Plan that  
2 includes people with disabilities. I believe the  
3 U.S.'s National Plan for Broadband could, in fact,  
4 be unique by having such language included in that  
5 plan. I do not know what other countries'  
6 national plans for broadband have. Do they even  
7 mention disability from the point of view of  
8 inclusion? But could not the U.S. have one that  
9 does this? I think this would be a huge step  
10 forward. It would send a very strong message,  
11 whether it's applications, whether it's IT,  
12 whether it's AT, whether it's -- you know, the  
13 whole myriad of things that involve broadband,  
14 whether it's web content, whether it's developers,  
15 engineers. If you have it at the high level of a  
16 principle it would be affecting every single arena  
17 there. So I'm looking to seeing that in the plan.

18 I also want to mention I'm a member,  
19 with my colleagues here, of the Coalition of  
20 Organizations for Accessible Technology, and that  
21 is one of the key principles that we put forward.

22 Thank you.

1 MR. LEVIN: Can I ask a question?

2 MS. KING: Yes.

3 MR. LEVIN: One of the things that I  
4 think Congress asked us to do is write a plan,  
5 that is to say be very specific in terms of  
6 recommendations. I hear you in terms of the  
7 principle of inclusion and I think that -- I think  
8 most people in this room would certainly agree  
9 with that. How do we in writing it make it  
10 meaningful? And you don't have to answer that  
11 right away, but I'd ask that you maybe file some  
12 comments to us. In other words, while there is a  
13 principle, how do we actually apply it to all of  
14 the recommendations that, you know, Congress is  
15 going to ask us to make?

16 That's just a -- it's a general  
17 question, but I think we want to go at least one  
18 layer below that in terms of making it  
19 operational. When we think about how do we  
20 connect unserved communities; when we think about  
21 how do we increase adoption; when we think about  
22 applying broadband to health care, etc. If you

1       could help us think through, including that  
2       principle of inclusion in the actual  
3       recommendations so that it makes it much more  
4       real, much more specific, and much more valuable  
5       in that sense.  If you could follow up with us  
6       with some written commentary that would be really  
7       helpful.

8                   MS. SIMPSON:  This is Jennifer Simpson.  
9       I'd be very happy to do that and work with my  
10      colleagues to come up with a number of ways and  
11      phrases and language that I think would be very  
12      helpful as you write the plan.

13                   Thank you.

14                   MR. LEVIN:  Okay.  And also, as you  
15      think about it -- because you're far more familiar  
16      with kind of the existing programs -- and one of  
17      the things I think Congress wants us to do is kind  
18      of marry those programs that are serving certain  
19      communities.  And you see this, for example, with  
20      the RUS program, which is serving rural America,  
21      to do a number of things with broadband.  So it's  
22      not simply about universal service; it's not

1 simply about telecommunications policy. It's  
2 about how do we kind of unleash potential by  
3 combining existing programs in various areas that  
4 can be more effective if there's a broadband  
5 component to it.

6 MS. SIMPSON: I understand. Yes, thank  
7 you. I understand it's the programmatic piece  
8 that you're looking at.

9 MR. LEVIN: Exactly.

10 MS. SIMPSON: We'll get back to you on  
11 that. Thank you.

12 MR. LEVIN: Thank you very much.

13 MS. KING: Thank you, Jennifer. Larry  
14 Goldberg, do you have something to add?

15 MR. GOLDBERG: Yes, thank you. And it  
16 was great that Jennifer Simpson just stood up on  
17 this issue because one of the best ways to drive  
18 adoption, obviously, is to make broadband services  
19 compelling and useful to people -- to everyone --  
20 and particularly in this case people with  
21 disabilities.

22 Jennifer has been very active in the

1 area of health IT and telemedicine, which is a  
2 huge issue around the exploration and use of  
3 broadband. There are a number of standards groups  
4 that are looking at developing the  
5 interoperability of health IT where a tremendous  
6 amount of resources and funding is going to be  
7 poured into it. But I don't believe those  
8 standards have yet adopted aspects of assuring  
9 that people with disabilities are going to be  
10 fully served by those services. So unless we  
11 build into those standards the necessity of full  
12 accessibility -- the use of personal health  
13 records, the use of accessible records by  
14 administrators -- that opportunity will be lost.

15 So I would suggest the National  
16 Broadband Plan include a direction that the health  
17 IT standards and funding be highly cognizant of  
18 the need of people with disabilities, and whether  
19 those standards would flow through HHS or NIST or  
20 any other federal agency, they need to be embodied  
21 in the federal guidelines.

22 The other issue is, you know, how can we

1       assure in a plan that all these issues are  
2       addressed? The notion of something like a  
3       disability impact statement has been floated from  
4       time to time. Just like environmental impact  
5       statements are required in a variety of areas  
6       throughout state, local, and federal government,  
7       perhaps people who are building broadband networks  
8       for people who are deploying such services should  
9       be directed to look into and address the issue in  
10      ways that they may not have thought of before. If  
11      it was included in federal plans, in state and  
12      local plans, where they actually are asked to  
13      answer the questions or what impacts and what  
14      services with disabilities would gain or lose and  
15      what barriers or drops of barriers would be  
16      included when they themselves are deploying  
17      broadband services.

18                     Thank you.

19                     MS. KING: Great. Thank you, Larry.  
20      Another issue I'd like to throw out for the  
21      question of benchmarks and indicators -- someone  
22      did mention telework. Can someone speak to that?



1 That's something that we might be able to measure.

2 Hello? Okay. Please come to the center  
3 of the room so we can get you on camera. Thank  
4 you. And introduce yourself.

5 MR. WILSKER: I will do that.

6 MS. KING: Thank you so much.

7 MR. WILSKER: I guess I don't need two  
8 of these, do I?

9 Hi, my name is Chuck Wilsker and I'm the  
10 president and co-founder of a nonprofit  
11 organization headquartered here in Washington  
12 called the Telework Coalition. And we deal with  
13 many different areas, including business  
14 continuity and how we're going to address swine  
15 flu, to economic means. But one of the areas that  
16 we always call "mom and apple pie" are addressing  
17 the applications for telework as far as providing  
18 oral economic and employment opportunities,  
19 opportunities for older workers especially that  
20 are reentering the workforce now in light of the  
21 demise of their 401Ks, and the fact that telework  
22 provides a great opportunity for providing persons

1 with disabilities employment.

2 I've had a lot of meetings at the Office  
3 of Disability Employment Policy and from meeting  
4 with the previous administrator he told me the  
5 number one problem with persons with disabilities  
6 getting a job is transportation issues. And the  
7 whole idea of telework is it eliminates a  
8 transportation issue. I'm also involved in the  
9 United Nations Group that is looking at the 650  
10 counted -- 650 million disabled around the world  
11 and how are they going to use information and  
12 communications technologies to bring broadband to  
13 all of these people.

14 The point that I brought up prior to the  
15 first meeting we had at the U.N. was that it's a  
16 great idea to bring it to a country, and it's a  
17 great idea to bring it to a city, and it's a great  
18 idea to bring it to a building across the street.  
19 But if I have trouble crossing the street and  
20 going to that place across the street does not  
21 have all of the adaptive technologies that I need  
22 to work, then why can't we bring that job, that

1 last little bit, to me where possibly at home if I  
2 have these technologies and if I have broadband I  
3 can now work?

4 MS. KING: Now, how would we measure  
5 that, Chuck? Is there a registry of teleworkers?

6 MR. WILSKER: Oh, there are tremendous  
7 numbers of teleworkers that are now working from  
8 home. I know that, for example, there's an  
9 organization called Alpine Access and they're a  
10 call center group in Golden, Colorado, I believe.  
11 And they have a contract to work with the IRS.  
12 And each year, starting around September, when you  
13 call something like -- I don't know exactly the  
14 number; it's like 1-800-GETFORMS or something like  
15 that -- a vast majority of the calls that come in  
16 are answered by persons with disabilities working  
17 from home.

18 So, this is something we know works.  
19 And again, it's the whole idea that broadband is a  
20 key component of this and we know that persons  
21 with disabilities are not just in the main cities  
22 where we have broadband; they are in all the rural

1 areas, too. And if we can get this into unserved  
2 and underserved areas, we can now not only provide  
3 employment opportunities for people, able-bodied  
4 people, but also those with disabilities because  
5 it overcomes one of the major objections.

6 MS. KING: Great. Thank you so much,  
7 Chuck. Greg, would you pose Question 11 for us?

8 MR. HLIBOK: Sure. This question is  
9 open to anyone. Do we need additional regulation  
10 to make broadband accessible to those individuals  
11 with disabilities? And if so, do you think that  
12 the legislation currently introduced by  
13 Representative Markey, HR3101, the 21st century  
14 Communications and Video Accessibility Act of  
15 2009, would be an effective approach? For  
16 example, it has been a recurring issue that many  
17 deaf and hard-of-hearing employees are not able to  
18 have point-to-point video access at their  
19 workplace, specifically federal agencies or really  
20 in the private sector, as well. The main concern  
21 is security issues. Many folks think that  
22 point-to-point video access will compromise

1 security. So, do you believe that this bill that  
2 is introduced appropriately addresses that issue?

3 MS. KING: Karen, would you like to  
4 speak to that?

5 MS. PELTZ STRAUSS: Hi. I'm Karen Peltz  
6 Strauss and I'm with the Coalition of  
7 Organizations for Accessible Technology, which is  
8 the leading organization that has been working on  
9 the legislation. The organization started in  
10 March of 2007 with around 10 groups and now has  
11 over 240 organizations, 92 of which are national  
12 and the rest are regional, local, and state  
13 organizations.

14 The reason I mention the numbers is  
15 because what it shows is the breadth of concern  
16 across the nation for the need for new legislation  
17 to fill in the gaps. In the 1980s and the 1990s,  
18 Congress passed a number of pieces of legislation,  
19 including the hearing aid compatibility  
20 legislation, Title IV of the ADA requiring relay  
21 services, decoder legislation requiring  
22 televisions to have captioning, captioning

1 regulations, and, of course, Section 255, which  
2 requires all telecommunications products and  
3 services to be accessible. The problem is that  
4 none of these laws have kept pace with current  
5 technology. None of the laws that I just  
6 mentioned apply to the Internet and none of them  
7 apply to broadband.

8           So, unfortunately, what we've discovered  
9 in the past is, as many people today have  
10 mentioned, people with disabilities are usually an  
11 afterthought. The technology goes forward; people  
12 with disabilities aren't considered in the design  
13 of the technology; and then there is kind of a  
14 catch up. Let's make sure that we retrofit. It's  
15 expensive.

16           When that occurs it's burdensome and  
17 it's not as reliable as it needs to be.

18           What this law is trying to do is to get  
19 at the front of the curve. It's trying to make  
20 sure that as new technologies are developed  
21 dealing with broadband, dealing with the Internet,  
22 dealing with digital technologies -- that

1 universal design and accessibility is incorporated  
2 at the front end to avoid expensive retrofitting  
3 later on.

4           There are some in the industry that  
5 believe that the marketplace will take care of  
6 this. Those of us in the disability community  
7 that have worked on these issues unfortunately  
8 have to say that that hasn't worked in the past.  
9 And there have been various testaments today. Jim  
10 Fruchterman was one example who said that people  
11 with disabilities are about three years behind.  
12 It's always a game of catch up. This law will  
13 extend all of the current laws that we currently  
14 have -- again, hearing and compatibility relay  
15 services general products and services -- to the  
16 Internet, to the web, to broadband. And so it's  
17 unfortunate because nobody really likes  
18 regulation, but we do think that additional  
19 regulation is necessary.

20           MS. KING: Thank you, Karen. Rosaline.  
21 Please introduce yourself again.

22           MS. CRAWFORD: Rosaline Crawford with

1 the National Association of the Deaf, also with  
2 the Coalition.

3 In addition to HR3101, which would  
4 update the Communications Act, we also need to be  
5 looking at updating the ADA. I know the  
6 Department of Justice issued a Notice of Proposed  
7 Rulemaking last year. Those rules have not been  
8 issued. We really need the Department of Justice  
9 to take a strong stand on the application of the  
10 ADA to entities, businesses, et cetera, that do  
11 business on the Internet. We have to have clear,  
12 unequivocal application of the ADA to businesses  
13 and entities doing, you know, communicating and  
14 providing information and services online.

15 In addition to that we have to have  
16 enforcement. We have laws and regulations that  
17 require employers to make sure that their Internet  
18 and Intranet is accessible to employees and  
19 applicants. We have laws that require educational  
20 services. All this online education is great.  
21 It's terrific. But if it's not accessible, it's  
22 useless to just a tremendous number of people.



1 And this really comes down to enforcement.  
2 Enforcement of existing laws has got to be stepped  
3 up.

4 Thank you.

5 MS. KING: Thank you. Thank you. For  
6 another question, is there a role for state and  
7 federal equipment distribution programs to play in  
8 the broadband. Would anyone like to speak to that?

9 Karen?

10 MS. STRAUSS: I mentioned before --  
11 well, actually let me just tell you about state  
12 and -- state equipment distribution programs  
13 because there are some people here that may not be  
14 familiar with them.

15 These are programs that distribute  
16 basically AT, assistive technology, or specialized  
17 customer premises equipment to people within their  
18 states, typically to, again, provide communication  
19 -- telecommunications access. Unfortunately,  
20 these programs are not very comprehensive and  
21 they're not throughout all 50 states. There are  
22 only, I don't know, I think about 30, 35 states

1 that now have them. They vary widely by income  
2 eligibility and they vary tremendously by the type  
3 of equipment that's given out.

4 One example -- again, I just want to  
5 bring it back to this -- is equipment for people  
6 who are deaf blind. These programs are not  
7 generally giving out people -- equipment for  
8 people who are deaf blind. We mentioned before  
9 that one of the proposals on the table is to fund  
10 such equipment. And these programs could be used  
11 to help distribute that equipment so they could be  
12 a -- perhaps a federal-state joint partnership  
13 that would enable the distribution of equipment.

14 There's also potentially a greater role  
15 for the federal government to work in a  
16 federal-state partnership with these programs  
17 generally, not just for deaf blind equipment, but  
18 for all equipment. Because, again, the programs  
19 right now are somewhat inadequate. So, I think  
20 there's a lot of leeway and a lot more that could  
21 be done that hasn't been done to date on that.

22 MS. KING: But there's no uniform

1 nationwide --

2 MS. STRAUSS: There's no uniform  
3 nationwide distribution program. As I said, the  
4 eligibility is conflicting, inconsistent with each  
5 other. Every state does their own thing.

6 I also see, as an aside, a tremendous  
7 possibility for the distribution of video  
8 equipment, which opens up a whole other range of  
9 issues. But right now that equipment is being  
10 given out by companies. That could also be  
11 shifted to the equipment distribution programs.  
12 But, again, that is a discussion for another day.

13 MS. KING: All right. Thank you, Karen.  
14 Elizabeth, would you pose the next question for  
15 us?

16 MS. LOVE: Sure. This is to everyone.  
17 What role could industry trade associations and  
18 consortiums play? For instance, could they  
19 organize a clearinghouse of accessible products  
20 for consumers?

21 MS. KING: Thank you. Is there someone  
22 who'd like to offer some advice on that issue?

1       Anyone on the phone bridge?

2                   Okay, I have a taker in the audience.

3                   MS. SCHWARTZ: Good morning, my name is  
4       Rebecca Schwartz. I work for the  
5       Telecommunications Industry Association. As Mary  
6       mentioned, we represent equipment manufacturers  
7       for the ICT industry.

8                   And as a trade association, I think one  
9       area that we could offer is our technical  
10      expertise. TIA is an accredited standards body.  
11      So I think, for example, hearing aid  
12      compatibility, we've had a large role in  
13      identifying problems and coming up with a standard  
14      and some of this has been voluntary.

15                  Mary mentioned our TIA 1083. And this  
16      came about when our -- some of our members noticed  
17      that they were getting a lot of similar complaints  
18      and realized that interference was coming from  
19      magnetic interference instead of RF, which has  
20      been typical with hearing aid compatibility. So,  
21      perhaps the FCC could maybe look at some of their  
22      informal complaints and when they see a trend,

1 they could bring these to trade associations and  
2 approach it from a consensus-based approach, which  
3 really worked with the current hack roles. And we  
4 have -- personally at TIA, we have great, very  
5 knowledgeable engineers.

6 And as for your question on the  
7 clearinghouse, this is something that TIA has  
8 mentioned in its filing in the broadband docket.  
9 And a lot of times I think the problem comes down  
10 to a lack of communication. I hear from some of  
11 our members that they will get a complaint and  
12 then -- they actually have a product already on  
13 the market. They -- it's just that the consumer  
14 is unaware of it. So, a clearinghouse could, you  
15 know, act as a solution not as a problem.

16 There's a group called the Mobile  
17 Manufacturers Forum. And they've actually  
18 developed a website and will put this all on a  
19 written ex parte, and we'll follow up with it and  
20 give you the website. But they've done this for  
21 mobile devices, and it's -- you can actually,  
22 like, click on, you know, whatever your disability

1 is and then it'll come up with some examples of  
2 products that might work well for you.

3 Thank you.

4 MS. KING: Thank you. Helena?

5 MS. MITCHELL: Helena Mitchell. I don't  
6 know if anyone from CTIA is here, but if they're  
7 not. I'll speak on their behalf.

8 CTIA does some really great things  
9 because with our center, one of the things they do  
10 is, every year, we put together a workshop at the  
11 convention so people know what's happening in the  
12 disability field in general.

13 We've also worked with AT&T. They've  
14 helped us put together a guide on how to use cell  
15 phones. Because a lot -- you go to Radio Shack or  
16 a lot of the providers and they don't know how to  
17 help people with disabilities. So, we've worked  
18 with them on a guide that all of the sales  
19 personnel have that they can give out. We're  
20 doing it in Georgia right now because obviously  
21 it's very expensive to roll it out.

22 And then, also, we've worked with AT&T

1 on the hearing aid compatibility and putting out a  
2 video. So, I think industry plays a really  
3 important role and it can be very cost-effective  
4 if you have industry working with educational  
5 institutions or government entities to help reduce  
6 the cost to everybody, but also be beneficial to a  
7 really large audience.

8 MS. KING: Thank you, Helena. Is there  
9 anyone on the phone bridge who would like to offer  
10 some information?

11 MR. FRUCHTERMAN: Jim Fruchterman.

12 MS. KING: Jim Fruchterman?

13 MR. FRUCHTERMAN: Yes. I just want to  
14 mention that Raising the Floor is another one of  
15 these sort of consortium opportunities. And Greg  
16 Vanderheiden has been hosting it at the University  
17 of Wisconsin Trace Center. But, for example, we  
18 have people from Mozilla who make the Firefox  
19 browser, IBM. We've gotten funding from Adobe as  
20 well as the federal government. And I think the  
21 goal of the Raising the Floor Consortium is both  
22 to develop open-source technology and let's call

1       it core components that people could build either  
2       open-source or commercial products on top of. And  
3       there's also an interest in coming up with ways to  
4       deliver systems to help people choose assistive  
5       technology, become aware of that.

6               And I think there's a lot of interest  
7       not only throughout the United States, but  
8       throughout the world in the concept of Raising the  
9       Floor and some of its goals. And so I think it's  
10       a consortium that will involve both regular  
11       mainstream IT companies, assistive technology  
12       companies and developers, and academics and  
13       consumers in trying to get wider access to basic  
14       assistive technology.

15               MS. KING: Thank you, Jim. We have one  
16       more question that we definitely want to pose here  
17       and that is regarding will technologies be coming  
18       -- forthcoming to allow for extended power backup?  
19       As we move into broadband dependability, we're,  
20       therefore, dependent on the electric grid.

21               Is anyone aware that something is in the  
22       works for it? And is this as important as we



1 understand it could be? Or is it something that's  
2 going to take care of itself? Does anyone have  
3 any input on the need for extended power backup?

4 Larry? Anyone? No, no ideas. All  
5 right.

6 MR. GOLDBERG: This is Larry.

7 MS. KING: I was able to put one in for  
8 you. And that's perfect timing because I believe  
9 we have a special guest arriving.

10 SPEAKER: We've got to get the mic on.

11 MS. KING: Okay.

12 SPEAKER: You have to use a handheld.

13 MS. KING: All right.

14 SPEAKER: Here we go, we're good.

15 MS. KING: Thank you.

16 (Recess)

17 MS. KING: Thank you, Chairman Hess.

18 We're right on time, thank you.

19 MR. GENACHOWSKI: Sorry to barge in, but  
20 I'm happy to do that. I know that Blaire  
21 introduced the topic today, this incredible effort  
22 of open workshops on this incredibly important

1 goal of developing a national broadband strategy  
2 for the country.

3 This particular panel today is one of  
4 great importance to me. Promoting opportunities  
5 for people with disabilities, it's a key priority  
6 of the administration, it's a key priority of the  
7 FCC's. And it's been -- it has personal meaning  
8 for me.

9 My father, who is an immigrant, when I  
10 -- he came here to be an engineer. And, you know,  
11 my father, like other immigrants, as I was growing  
12 up didn't spend a lot of time talking about the  
13 different things that he did. But when I was  
14 about 17, the age that my son is now, we went on a  
15 college trip and he took me to where he had gotten  
16 his masters in engineering at MIT. Took me into  
17 the dusty stacks of the library, pulled out an old  
18 typewritten thesis, and said, hey, here's what I  
19 did when I was in school.

20 And it was filled with technical  
21 drawings that I didn't understand at all. But it  
22 was about trying to design a device that would

1 help blind people read words on paper. He was a  
2 mechanical engineer, and, you know, worked within  
3 his discipline. But the idea was you'd have a  
4 device in your hand, you'd roll it around on a  
5 piece of paper, it would distinguish black lines  
6 from white, it would send kind of physical  
7 pinprick signals into your hand and you'd be able  
8 to read.

9           Anyway, it never actually, you know,  
10 went that far and he went off in a different  
11 direction. But the core lesson of that, you know,  
12 for me, really impressive accomplishment of my  
13 dad's and the commitment that I saw that he had.  
14 The core lesson has stayed with me, which is a  
15 lesson about the power of communications  
16 technologies to transform lives for the better  
17 and, in particular, to help provide opportunities  
18 for disabled people to become part of our  
19 communications infrastructure in this country,  
20 which is so critical to our economy, to commerce  
21 that we do every day, to communicating with our  
22 families, and to addressing public benefits like

1 health care information and everything else.

2 So, I couldn't be just more pleased that  
3 the Commission is doing this workshop to explore  
4 opportunities around disabilities as part of the  
5 National Broadband Strategy. And I couldn't be  
6 more pleased to introduce a special guest that we  
7 have today, who will speak as part of the  
8 workshop.

9 Kareem Dale is special assistant to the  
10 president for disability policy. He's the first  
11 person ever named to a White House post  
12 exclusively dedicated to disability issues.

13 He also has a position on the Domestic  
14 Policy Council working on domestic policy issues.  
15 And as you'll see in a minute when he speaks, he  
16 is one of the most impressive people I have ever  
17 met and worked with. I'm proud that someone like  
18 Kareem Dale is in our government. I know that  
19 Kareem wakes up every day thinking about what we  
20 can do to create opportunities for disabled people  
21 in the United States and advance the interest of  
22 all Americans.

1           So, Kareem? On behalf of all of us at  
2           the FCC, thank you so much for being here. And I  
3           ask you all to join me in a round of applause for  
4           Kareem Dale.

5                           (Applause)

6           MR. DALE: Thank you. Thank you very  
7           much, Julius, for that great introduction. Very  
8           much appreciated.

9           And thank you all. Thank the FCC for  
10          inviting me here to share a few words with you all  
11          today on this extraordinary, really, undertaking  
12          that we are getting ready to undertake under --  
13          with Julius' leadership.

14          From the White House's perspective, I  
15          think the critical issue is that how do we go  
16          about bringing about the overall change for people  
17          with disabilities that the president talked about  
18          during the campaign? And they started to fulfill  
19          in his first seven months as president of the  
20          United States of America.

21          And with the president's leadership, I  
22          believe -- and I think it's been borne out -- that

1       you start with people. And you start with  
2       appointing the right people in the right positions  
3       to make sure that they are ready and willing and  
4       capable of carrying out the president's agenda for  
5       people with disabilities. And I think we have  
6       begun, with the president's leadership, to begin  
7       to build a great team starting at the White House,  
8       starting at the senior levels of the White House,  
9       which is critical to getting things done in D.C.,  
10      as you all know much better than me. And I want  
11      to talk about that leadership team that the  
12      president has put in place at the White House,  
13      which I think is -- provides the groundwork for  
14      bringing about the change that we need for people  
15      with disabilities.

16                 We have Paul Miller, who I am sure many  
17      of you all know. Paul is special assistant to the  
18      president in the White House Office of Personnel.  
19      Paul has responsibilities for appointments of  
20      people with disabilities as well as generally  
21      appointments of the Department of Education,  
22      Department of Justice, which is critical because

1 he then can make sure that people with  
2 disabilities are not only in disability-specific  
3 appointments, but also are considered for  
4 non-disability appointments. So that we are  
5 integrated as people with disabilities -- that we  
6 are integrated and included throughout the  
7 government.

8           So, Paul is a critical part of that team  
9 and is on the senior leadership team in the White  
10 House Office of Personnel.

11           We also have Jeff Crowley, who works in  
12 the Domestic Policy Council. Jeff is the national  
13 AIDS director as well as a senior advisor on  
14 disability policy working in the Domestic Policy  
15 Council. And then we have myself, who the  
16 president nominated to be special assistant to the  
17 president for disability policy. And just a brief  
18 bit about how Jeff and I specifically -- how we  
19 work together. We all work together, but Jeff and  
20 I both do policy.

21           So, I sit in the Office of Public  
22 Engagement working on outreach for people with

1 disabilities. So, anything that -- the Office of  
2 Public Engagement is the front door to the White  
3 House. So anything having to do with reaching out  
4 to the community, conveying the message of the  
5 president to the community and also conveying the  
6 message of the community to the president to make  
7 sure that we are hearing what the community is  
8 interested in, what they're concerned about, the  
9 policy changes that are critical to this  
10 community. And so we serve as a conduit in the  
11 Office of Public Engagement. And I think we've  
12 had some extraordinary accomplishments.

13 I also sit, as Julius mentioned, in the  
14 Domestic Policy Council working on disability  
15 policy. And Jeff and I essentially split up those  
16 areas of policy for people with disabilities. So  
17 Jeff focuses, for example, as the lead on health  
18 reform. Jeff is the lead on housing. I lead on  
19 education, employment, technology. And we split  
20 up all the areas and we both work on all of the  
21 areas. But it's easier if one of us is the lead  
22 on certain key areas so that we can help move an



1 agenda forward.

2 And so that's how we have it set up.

3 And so whereas in the past, you'd never had one  
4 person at a Special Assistant to the president  
5 level or higher focused exclusively on disability  
6 issues, you now have three at the White House.

7 And so that it's this president's commitment and  
8 that demonstrates this president's commitment.

9 And let's be clear about this. During  
10 the campaign, he was asked through a questionnaire  
11 by AAPD and others to guarantee that he would put  
12 in place a special assistant to the president for  
13 disability policy and he agreed, but he was not  
14 asked to do more than that. So, not only did he  
15 fulfill his commitment for that one position, but  
16 because he understood that we needed more to  
17 ensure and bring about the change for this  
18 community, he put two more people in place at the  
19 special assistant to the president level or higher  
20 because he knew that that's what we needed to get  
21 the job done. And so, we have built a good team  
22 at the White House.

1           We are starting to build a good team  
2 throughout the agencies, from Department of Labor  
3 with Kathy Martinez as the ODEP director to Alexa  
4 Posny, who has been nominated as OCEA secretary,  
5 to Christine Griffin, who has been nominated as  
6 the number two position at OPM. We are building a  
7 great team for people with disabilities to ensure  
8 and bring about the goals that the president has  
9 set out.

10           And in the technology arena, we have  
11 begun to make inroads and strides. And I think  
12 that we need look no further than the appointment  
13 of Julius Genachowski as the chairman of the FCC  
14 as a critical position to improve the lives for  
15 people with disabilities as it relates to  
16 technology. Julius, when he was appointed,  
17 immediately reached out to me and wanted to sit  
18 down and talk to me about issues for people with  
19 disabilities. He and I have had several  
20 conversations about the commitment of the FCC on  
21 disability issues, and he is committed to  
22 enhancing the various offices that work on

1 disability. He is committed to working with the  
2 White House to make sure that people with  
3 disabilities have the access to technology and are  
4 fully capable of accessing the technology as we  
5 move forward because we all know that the  
6 president during the campaign really set new  
7 ground for technology in terms of political  
8 campaigns. And we are working on setting new  
9 ground from a technology standpoint now that we  
10 are in the administration.

11 And working with Julius and his  
12 incredible team, I think we're going to make some  
13 incredible strides.

14 And, you know, I tell people all the  
15 time -- I get calls every day. And that's because  
16 it, you know, just the state that we are in in  
17 this country. I get calls everyday that say, you  
18 know, how come you haven't done this, how come you  
19 haven't changed the world in the first seven  
20 months? And I say, you know, it's been seven  
21 months. You know, you got to give us a little bit  
22 of time as we try to get our feet under us.

1           But we have made extraordinary progress  
2           in that seven months. I don't believe, you know,  
3           we have not sat idly by. And besides the  
4           appointments that I believe we have put in place  
5           -- by the way, according to the community, to the  
6           disability community, leaders in the community, we  
7           have made more appointments of people with  
8           disabilities in the federal government than any  
9           other president has made during that president's  
10          entire term. And we've done it in the first seven  
11          months, and we're just getting started.

12                 So, we have an incredible team ready to  
13                 continue that work and continue to build on those  
14                 goals.

15                 But besides appointments, the next  
16                 critical issue is policies. What are we going to  
17                 do from a policy perspective for technology, to  
18                 ensure the accessibility of technology for people  
19                 with disabilities?

20                 And I'll talk about a couple of key  
21                 things that I think that we have done and we are  
22                 prepared to do. The new chief technology officer

1 -- who Julius knows very well -- Aneesh Chopra and  
2 his team, a woman by the name of Beth Noveck,  
3 who's done a lot of work with Life Without Limits.  
4 They run the chief technology officer at the White  
5 House and they already are very committed to  
6 disability issues. Aneesh and Beth have had a  
7 couple of different meetings with different  
8 technology leaders in the disability community.  
9 We are in the process of exchanging ideas and  
10 trying to figure out what are some of the best  
11 avenues to ensure accessible technology from the  
12 perspective of the White House and then from the  
13 perspective of the broader federal government.

14 But other policies that we have brought  
15 about in the first seven months. I think one of  
16 the most critical things that we have done is the  
17 signing of the UN Convention on the Rights of  
18 Persons With Disabilities and recognition of the  
19 19th anniversary of the ADA. The president signed  
20 the United Nation -- or the president announced  
21 that we would signed the United Nations Convention  
22 on the Rights of Persons with Disabilities, and

1 that was done on July 24th.

2 And after that, the president directed  
3 Ambassador Rice, who the next week in New York  
4 actually signed the UN Convention, along with  
5 Valerie Jared, who was present. And we hosted a  
6 fundraiser. And as you all very well know, the UN  
7 Convention has many, many components to it.

8 But one of the components is ensuring  
9 full and equal access to technology for people  
10 with disabilities across the world.

11 And by us signing that convention, we  
12 are committed to full accessibility of technology  
13 for people with disabilities, and we continue to  
14 work on those areas. But I think that seminal  
15 moment in this country's history of signing such  
16 an extraordinary treaty demonstrates where this  
17 president is on the issues facing people with  
18 disabilities. And we're in the process of  
19 starting to work on ratification or submitting a  
20 package of ratification for that. It's going to  
21 be a very significant process. It's not something  
22 that's going to happen in, you know, a couple of

1 days or a couple of weeks. It's a process. We're  
2 committed to transparency of that process, we're  
3 committed to ensuring that people with  
4 disabilities and various organizations are  
5 involved in that process. We certainly will be  
6 wanting to hear from the community, as we work  
7 towards submitting a package -- a ratification  
8 package to the Senate for ratification.

9           And to that end, I think a couple of  
10 weeks, in September 2nd through the 4th, the  
11 conference -- there's a conference of state  
12 parties, a convention for the conference of state  
13 parties for those who have signed and ratified the  
14 UN Convention, and we are going to be a part of  
15 that. Ambassador Susan Rice is going to be  
16 leading a delegation at that convention. I will  
17 be a part of that delegation and joining  
18 Ambassador Rice as she makes remarks at that  
19 historic convention in New York. And I believe  
20 it's September 2nd through the 4th. I don't  
21 believe Ambassador Rice's exact time of speaking  
22 is set yet, but she will be leading a delegation.

1           So, we are committed to these issues.  
2           And I know that you all here today have been  
3           working on broadband accessibility and talking  
4           about as we put together this broadband plan -- as  
5           the FCC leads that effort to put together a  
6           broadband plan -- making sure that people with  
7           disabilities are not left behind. And I am very  
8           confident in the FCC's commitment to ensuring that  
9           people with disabilities won't be left behind.

10           And we at the White House, we are  
11           committed to working with the FCC. We're  
12           committed to working with you in the community so  
13           that people with disabilities are not left behind  
14           in broadband.

15           For those of you who may not know, I am  
16           blind. And technology has been an extraordinary  
17           part of the reasons that I have gotten to where I  
18           am. I use many, many different pieces of software  
19           to ensure accessibility. I have a Braille node, I  
20           use Window Eyes to -- on my computer, and am a  
21           big, big, big fan of technology. Whether you're  
22           talking about talking ATMs, whether you're talking



1 about talking cell phones or BlackBerrys, I have  
2 all of those. Talking BlackBerrys to talking cell  
3 phones to computer technology, I'm a big fan of  
4 technology and I believe it's critical.

5           There's nothing more powerful or  
6 empowering than being able to walk up to an ATM  
7 machine and use it by yourself without having to  
8 ask somebody to help you. There's nothing more  
9 empowering than being able to put your own contact  
10 in your cell phone without having to ask somebody  
11 to do it or to write your own memo or to read your  
12 own e-mail. That is empowering. That gives  
13 people the tools and the power that they need to  
14 excel, and, more importantly, to become productive  
15 tax-paying members of society.

16           And so, we intend to ensure -- we intend  
17 to work very hard on making sure that people with  
18 disabilities are not left behind in this broadband  
19 explosion and this explosion of technology. And  
20 we remain committed to working with the community.

21           So, I look forward to working with each  
22 and every one of you. I look forward to joining

1 forces with the FCC and Julius' team and  
2 continuing to work on these issues. I thank you  
3 all for inviting me and I appreciate your time.

4 (Applause)

5 MS. KING: Thank you very much, Kareem.  
6 We very much appreciate your participation today.

7 We had set aside time for a  
8 question-and-answer period, an open mic, and we're  
9 going to try to get some of that in here.  
10 Especially we'd like to hear from people we  
11 haven't heard from yet today. So, some of you  
12 haven't been to the mic yet.

13 Elizabeth, would you like to give us an  
14 overview of the question and answering  
15 opportunity?

16 MS. LOVE: Sure. Well, I mean, people  
17 can -- you know, certainly as, you know, any  
18 questions that -- first of all, any questions that  
19 we haven't asked that you thought we should have  
20 asked, now is the time to do that. You can raise  
21 the question and answer it yourself or look to  
22 others to answer it.

1           So, I would just put it very broadly  
2     like that.

3           MS. KING: All right, thank you. Do we  
4     have any takers? Did I see a hand from Elizabeth  
5     Spears? Okay? Please introduce yourself.

6           MS. SPEARS: Hello, everyone. My name  
7     is Elizabeth Spears. And I come to you from the  
8     American Association of Deaf Blind. We represent  
9     an organization of, by, and for people with both  
10    hearing and vision loss.

11           There's specific issues in terms of  
12    broadband access, which strikes this community --  
13    many, many people in our membership, many people  
14    depend upon their computers for access to the  
15    Internet, especially folks who are completely deaf  
16    and completely blind. They get access to  
17    information on the Internet through a Braille  
18    display.

19           In addition to that, a great deal of our  
20    membership are in isolated areas, sometimes where  
21    the access to the Internet and the information  
22    that can be found on it for emergencies remains

1 critical. Also, there are those among our  
2 membership who are deaf their whole lives for  
3 whose native language is American Sign Language,  
4 and they are able -- and users of American Sign  
5 Language are able to avail themselves of the video  
6 relay service. And that requires broadband  
7 connectivity.

8 Lots of people are on fixed incomes, and  
9 they can benefit a great deal from broadband  
10 subsidies and support because of their limited  
11 incomes.

12 H.R. 3101 is going to go a good deal  
13 further to address that problem. And H.R. 3101 is  
14 going to be able to help this population purchase  
15 equipment for use in their home because there are  
16 a lot of issues that are quite unique to this  
17 population. And, again, they're not going to be  
18 able to afford the kinds of equipment that will  
19 allow them to access the Internet and the services  
20 that can be found there.

21 Thank you so much.

22 MS. KING: Thank you, Elizabeth. Kelby?

1           MR. BRICK: Good morning, once again. I  
2 am Kelby Brick representing Purple Communications.  
3 And in addition to my previous comments, there are  
4 two specific things that I think the Commission  
5 can take up going forward, one of which is  
6 allocating additional resources to the Disability  
7 Rights Office. They're overwhelmed, swamped,  
8 there's quite a backlog because of the issues that  
9 are raining down on them, and there's a  
10 commitment, of course, at the level of the DRO to  
11 bring broadband into the contingency that we're  
12 talking about.

13           And also, I would like to talk about the  
14 Commission has already regulated IP-enabled relay  
15 services, which provide direct services for deaf  
16 and hard of hearing and speech disabled callers.  
17 And that is used through broadband as a mechanism.  
18 And those services can certainly guide the  
19 Commission to increase the outreach efforts, the  
20 education efforts, and research and development  
21 that will enable individuals with disabilities to  
22 access the relay services and certainly depend

1 more fully on broadband. And I think that the  
2 Commission can go much further to integrate  
3 broadband into the lives of people with  
4 disabilities in those mechanisms.

5 Thank you.

6 MS. KING: Thank you, Kelby. Is there  
7 anyone else who would like to offer some input?

8 We have about five more minutes. Yes?

9 MR. BOJES: Hi, I'm Gary Bojes, and I'm  
10 program advisor for the Rural Utilities Service to  
11 the former FCC Chairman Jonathan Adelstein. And I  
12 just thought I'd invite a comment and a question,  
13 and I really appreciate Kareem's enthusiasm.

14 And Congress put together the American  
15 Recovery and Reinvestment Act and made a major  
16 investment in telecommunications. I just want to  
17 describe a couple components of that very quickly  
18 because I think there's possible strategies that  
19 the groups share. And this is kind of an outreach  
20 because we're partners with FCC and we're partners  
21 with you all as well.

22 But two components of that are

1 interlinked with many of the policies that we  
2 already have in place, but one component is during  
3 the first evaluation of any of those projects,  
4 discrimination is a key component. And those  
5 programs and policies on -- wherever they are, and  
6 in our case rural America and those rural  
7 proposals -- are companies or small businesses or  
8 communities that are making proposals for that  
9 funding have committed that they have met the  
10 discrimination area.

11 To connect it to a second thing, on our  
12 website we talk about discrimination, we talk  
13 about individuals with disabilities. The second  
14 part of the Recovery Act, or our evaluation of  
15 those that qualify, is strategic partners. And so  
16 I don't know if any of you here are promoting  
17 becoming strategic partners with those applicants,  
18 but there's billions of dollars at the table and  
19 billions of requirement needs for these companies  
20 to have strategic partners. The strategic  
21 partners that are in this room -- so, if that  
22 hasn't been one of the strategies for outreach and

1       you could get on one of those applications  
2       relatively easily and quickly by volunteering and,  
3       better so, identifying the local individuals with  
4       disabilities who will reap those benefits in their  
5       small communities and rural America or in the NTIA  
6       programs, and ask your local folks to be strategic  
7       partners with them. And make sure that this one  
8       discrimination -- very small line item amongst a  
9       number of targeted groups -- does not get left  
10      behind or is front and center with that.

11               MS. KING: Thank you very much. That's  
12      very interesting information. If it's new  
13      information to those of you in the audience, we  
14      can put you together with USDA and RUS for that.

15               Is there anything else we haven't  
16      covered? Tell us something we haven't heard, tell  
17      us something we don't know. Yes, Margaret?

18               MS. JEMMOTT: Is there a microphone back  
19      here?

20               MS. KING: Sharitta? Thank you.

21               MS. JEMMOTT: Thank you. Hi, my name is  
22      Margaret Jemmott, and I'm here both as a consumer



1 and I am a federal government employee.

2 One thing I would say to be included in  
3 the plan, a comment that I have, is that  
4 accessibility also be defined as usability. There  
5 are a lot of things that are said to be accessible  
6 to the community which are not.

7 As a federal government employee, I  
8 struggle with applications that are "accessible."  
9 However, they are not. An example is I cannot go  
10 into a website to view my personnel file. It is  
11 said to be accessible, and I can get in there, but  
12 I can't view the document.

13 So, when you -- when manufacturers are  
14 designing equipment, make sure that it's  
15 accessible for everybody. And testing is very  
16 important and guidelines on testing. What's  
17 currently being defined as accessible and how it's  
18 being tested is not working, inside and outside of  
19 the government.

20 And manufacturers, I would encourage you  
21 to do as the president has done and start from the  
22 top to the bottom and diversify your workforce.

1 And you'll be amazed at how quickly you will learn  
2 what the community needs.

3 The other point I would say is simple  
4 things that are designed that are there to help us  
5 that have been something as simple as a nib on the  
6 number 5 key -- for those of us that are blind --  
7 on remotes, telephones, key pads, whatever,  
8 somehow engineers have decided it's not always  
9 necessary. But that can make a device completely  
10 inaccessible for somebody who's blind.

11 MS. KING: Thank you, Margaret. Is  
12 there any additional information?

13 All right. Elizabeth, would you like to  
14 close for us?

15 MS. LOVE: Sure. First of all, thank  
16 you all very much for coming. And I think it's  
17 clear from the remarks you've heard from Kareem,  
18 the chairman, Blair, and Marcie how much of a  
19 priority and how we are committed to doing this  
20 right, and we want to make broadband accessible to  
21 people with disabilities.

22 Today's workshop is an early step in

1 this process of trying to make the plan fully  
2 integrated, and we're in the early step of  
3 gathering the facts and the data we need to draft  
4 the plan. And clearly there's not enough time to  
5 delve into the issues today and to do all the  
6 things we need to do.

7 So, in addition to participating in the  
8 workshop that Cheryl announced earlier today, we'd  
9 like you to submit additional materials for the  
10 record that are responsive to the questions that  
11 we asked, and also the questions we didn't ask,  
12 but you would like to answer.

13 And also, we're happy to have ex parte  
14 meetings. And starting next week, there's going  
15 to be a link on broadband.gov website to request  
16 such meetings. But if you want to go ahead and  
17 send your request in ahead of time, you can go  
18 ahead and contact Kim.Mattos -- and that's  
19 M-a-t-t-o-s -- at FCC.gov. And we will look  
20 forward to working with you in the coming months.

21 Thank you.

22 MS. KING: Thank you all for coming.

1 Give yourself a round of applause.

2 (Applause)

3 (Whereupon, the PROCEEDINGS were  
4 adjourned.)

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## 1 CERTIFICATE OF NOTARY PUBLIC

2 I, Carleton J. Anderson, III do hereby  
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17 Notary Public in and for the

18 Commonwealth of Virginia

19 Commission No. 351998

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