UNITED STATES OF AMERICA

FEDERAL COMMUNICATIONS COMMISSION

NATIONAL BROADBAND PLAN WORKSHOP

BROADBAND ACCESSIBILITY FOR PEOPLE WITH

DISABILITIES II: BARRIERS, OPPORTUNITIES, AND

POLICY RECOMMENDATIONS

Washington, D.C.

Tuesday, October 20, 2009

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 1    PARTICIPANTS:

 2    Welcome:

 3    SHERRESE SMITH
      Legal Advisor for Media, Consumer, and Enforcement
 4    Issues, Office of the Chairman

 5    Logistics:

 6    CHERYL J. KING
      Disability Rights Office, FCC
 7
      Panel 1: Leveraging Federal and State Resources to
 8    Make Broadband Accessible and Affordable

 9    Moderators:

10    CHERYL J. KING
      Deputy Chief, Disability Rights Office, FCC
11
      ELISE KOHN
12    Deputy Director, Adoption and Usage, FCC Broadband
      Team
13
      Panelists:
14
      GARY BOJES, Ph.D.
15    Senior Level Program and Policy Advisor, Rural
      Utility Service, U. S. Department of Agriculture
16
      C. MARTY EXLINE
17    Director, Missouri Assistive Technology Program

18    JENNIFER SHEEHY
      Director of Policy and Planning, Office of Special
19    Education and Rehabilitative Services (OSERS),
      Department of Education
20
      TERRY WEAVER
21    Director, IT Accessibility & Workforce Division
      Office of Governmentwide Policy, General Services
22    Administration (GSA)
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1   PARTICIPANTS (CONT'D):

2   DANIEL WEITZNER
     Associate Administrator for the Office of Policy
3   Analysis and Development, Department of Commerce,
     NTIA
4
     Panel 2: Accessibility and Affordability Barriers
5   to Broadband and Internet Use Faced by People with
     Disabilities
6
     Moderators:
7
     JOHN HORRIGAN
8   Consumer Research Director, FCC Broadband Team

9   ELISE KOHN
     Deputy Director, Adoption and Usage, FCC Broadband
10   Team

11   STEVE MIDGLEY
     Education Director, FCC Broadband Team
12
     JING VIVATRAT
13   Workforce Development Director, FCC Broadband Team

14   Panelists:

15   ERIC BRIDGES
     American Council of the Blind (ACB)
16
     ROSALINE CRAWFORD,
17   Director, Law and Advocacy Center, National
     Association of the Deaf (NAD)
18
     PAULA DURBIN-WESTBY
19   Member, Board of Directors, The Autistic Self
     Advocacy Network
20
     MARGARET V. PEGGY HATHAWAY
21   Vice-President for Public Policy, Spinal Cord
     Advocates
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 1    PARTICIPANTS (CONT'D):

 2    REBECCA LADEW
      East Coast Representative, Speech Communications
 3    Assistance by Telephone, Inc. (SCT)

 4    ELIZABETH SPIERS
      Director of Information Services, American
 5    Association of the Deaf-Blind (AADB)

 6    JIM TOBIAS
      President, Inclusive Technologies


 7

      ELIZABETH WEINTRAUB
 8    Member, Council on Quality and Leadership

 9    Panel 3: Advancing National Purposes for People
      with Disabilities
10
      Moderator:
11
      KRISTEN KANE
12    Director of National Purposes, FCC Broadband Team

13    Panelists:

14    Jim Fruchterman
      President, Benetech (Education)
15
      MARGARET V. (PEGGY) HATHAWAY
16    Vice-President for Public Policy, Spinal Cord
      Advocates (Jobs/ Civic Participation )
17
      ISHAK KANG
18    CEO/Founder, dot UI (Smart Grid)

19    KATHERINE D. SEELMAN, Ph.D.
      Professor, Rehabilitation Science and Technology,
20    University of Pittsburgh (Healthcare:
      Telerehabilitation)

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 1    PARTICIPANTS (CONT'D):

 2    CLAUDE STOUT
      Executive Director, Telecommunications for the
 3    Deaf and Hard of Hearing, Inc. (TDI) (Public
      Safety)
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      Panel 4: Technological Barriers and Solutions
 5
      Moderator:
 6
      WALTER JOHNSTON
 7    Chief, Electromagnetic Compatibility Division,
      OET, FCC
 8
      Panelists:
 9
      GREG ELIN
10    Chief Technology Officer, United Cerebral Palsy
      and Executive Director, Life Without Limits
11
      JIM FRUCHTERMAN
12    President, Benetech

13    DALE HATFIELD
      Executive Director, Silicon Flatirons
14
      JOHN SNAPP
15    Senior Technical Officer, Intrado

16    GREGG VANDERHEIDEN, Ph.D.
      Director, Trace Center, University of
17    Wisconsin-Madison

18    Policy Roundtable

19    Moderators:

20    MICHAEL J. COPPS
      Commissioner
21
      ELIZABETH LYLE
22    Policy Advisor, Broadband FCC Broadband Team
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 1    PARTICIPANTS (CONT'D):

 2    ERIK GARR
      General Manager, FCC Broadband Team
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      MARY BETH RICHARDS
 4    Special Counsel for FCC Reform, Office of the
      Chairman
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      SHERRESE SMITH
 6    Legal Advisor for Media, Consumer, and Enforcement
      Issues, Office of the Chairman
 7
      JENNIFER SCHNEIDER
 8    Broadband, Wireline and Universal Service Legal
      Advisor, Office of Commissioner Copps
 9
      Government Observers:
10
      DAVID FURTH
11    Deputy Bureau Chief, PSHSB, FCC

12    JANE JACKSON
      Associate Bureau Chief, WTB, FCC
13
      CHERYL KING
14    Deputy Director, Disability Rights Office, CGB,
      FCC
15
      MARK STONE
16    Deputy Bureau Chief, CGB, FCC

17    TERRY WEAVER
      Director, IT Accessibility and Workforce Division,
18    GSA

19    Participants:

20    ROB ATKINSON
      President, Information Technology and Innovation
21    Foundation

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 1     PARTICIPANTS (CONT'D):

 2     ELLEN BLACKLER
       Executive Director, AT&T
 3
       ALAN BRIGHTMAN
 4     Senior Policy Director, Yahoo!

 5     KATHRYN BROWN
       Senior Vice President, Public Policy Development
 6     and Corporate Responsibility, Verizon

 7     DEBORAH BUCK
       Executive Director, Association of Assistive
 8     Technology Act Programs (ATAP)

 9     DAVID CAPOZZI
       Executive Director, U.S. Access Board
10
       LARRY GOLDBERG
11     Director, Media Access Group at WGBH

12     PATRICK HALLEY
       Director, Government Affairs, National Emergency
13     Numbering Association (NENA)

14     DALE HATFIELD
       Executive Director, Silicon Flatirons
15
       MATTHEW KNOPF
16     Vice President, Business Development, PLYmedia

17     JANE MAGO
       Executive Vice President and General Counsel,
18     National Association of Broadcasters (NAB)

19     HELENA MITCHELL, Ph.D.
       Executive Director CACP And Principal
20     Investigator, Wireless RERC, GA Tech

21     RANDY POPE,
       American Association of the Deaf-Blind (AADB)
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 1    PARTICIPANTS (CONT'D):

 2    KEN SALAETS
      Director, Global Policy, Information Technology
 3    Industry Council (ITIC)

 4    PAUL SCHROEDER
      Director, Programs and Policy, American Foundation
 5    for the Blind

 6    GRANT SEIFFERT
      President, Telecommunications Industry Association
 7    (TIA)

 8    DANE SNOWDEN
      Vice President, External and State Affairs,
 9    CTIA-The Wireless Association ®

10    CLAUDE STOUT
      Executive Director, Telecommunications for the
11    Deaf and Hard of Hearing, Inc. (TDI)

12    KAREN PELTZ STRAUSS
      Co-Chair, Coalition of Organizations for
13    Accessible Technologies (COAT)

14    JIM TOBIAS
      President, Inclusive Technologies
15
      GREGG VANDERHEIDEN
16    Director, Trace Center, University of
      Wisconsin-Madison
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      JOE WAZ
18    Senior Vice President, Comcast Corporation

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

 2              MS. SMITH:  You fine.  Can you guys hear

 3    me?  Hello?  Hello?  Okay.  There we go.

 4              Good morning.  I'm Sherrese Smith.  I'm

 5    the Chairman's Legal Advisor for Media, Consumer,

 6    and Enforcement Issues.

 7              And on behalf of the Chairman and the

 8    Chairman's Office, I would like to welcome you to

 9    today's workshop on Broadband Access for People

10    with Disabilities.

11              We are happy that more than 200 of you

12    are already signed up either online or here in the

13    room, and we appreciate you coming today and

14    sharing in this experience.  We think it's really

15    going to be a very important and informative day.

16              As most of you know, Chairman

17    Genachowski is very committed to ensuring that

18    people with disabilities have full access to

19    communications.  And we at the FCC know that it is

20    critical that these issues concerning access for

21    people with disabilities are fully integrated into

22    the National Broadband Plan that the Commission
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1   will deliver to Congress in February.

2   In addition, we know that the

3   accessibility issues pose very complex challenges,

4   and we are committed to bringing together all of

5   the stakeholders to address these very difficult

6   issues.

7   Now to that end, we have a very full day

8   planned. The workshops that we hold today build

9   on the NOI record, a town hall meeting that we

10   held in August, and a detailed public notice that

11   we issued in September.

12   We have almost 65 stakeholders involved

13   from the disability community, from industry,

14   academia, non-profits, and all levels of

15   government today, and they are participating on

16   panels and in a policy roundtable, and exhibiting

17   accessible technologies that will be important to

18   the community later on.

19   We hope that today will provide a very

20   robust opportunity for people to give us their

21   ideas, to give us their recommendations, and to

22   tell us how we can best serve the community going

1   forward.

2   I know that I personally look forward to

3   participating in the policy roundtable later on

4   today, and I've already heard from some of you

5   with some very great ideas, and I look forward to

6   kind of thinking through some of those issues

7   later on.

8   I think I'd like to also take the

9   opportunity to note that Commissioner Copps will

10 be holding a field hearing on November 6th at

11 Galludet University, and he will be addressing

12 these very same issues.

13   We encourage you to participate in that

14 event, and we encourage you to pass the word about

15 that event, because, again, we look forward to

16 having as much participation as possible when we

17 deal with some of these matters.

18   Finally, the Broadband Team wants to

19 reiterate that during this whole process, we

20 encourage you to continue submitting comments and

21 reaching out to the team to give them

22 recommendations and to talk about your ideas.

1   I also want to take a few minutes to

2   thank Cheryl, the Workshop Coordinator, and others

3   in CGB and on the AB staff for putting this

4   together. I mean this is an amazing day, with

5   amazing topics, and amazing participants. And you

6   really did a great job in putting this together.

7   I also want to take the opportunity to

8   thank Elizabeth Lyle, who has been just such a

9   great colleague and participant and just

10   cheerleader for these issues, and since I've been

11   here, she's just been amazing at helping me get up

12   to speed and to really, you know, help me discuss

13   these issues with people in the community. And I

14   want to thank you for all of your work.

15   So, now I'm going to turn this over to

16   Cheryl, and we're going to get started on what

17   will be a great day.

18   MS. KING: Thank you, Sherrese. I have

19   logistics to go through to get us over by --

20   oriented for today. Please turn your cell phones

21   off. You won't need them. We're going to keep

22   you busy.

1   Restrooms are on a hall parallel to the

2   one behind the Commission meeting room. If there

3   is an emergency, evacuation or shelter in place.

4   If you shelter in place, then we'll stay here.

5   Everything is prepared to take care of the group.

6   If it's evacuation, follow the crowd.

7   Leave the way you came in. Exit the building.

8   The accessibility exhibits are down the

9   hall. There are signs posted on the walls behind

10   the Commission meeting room. We have five

11   excellent exhibits of accessibility.

12   I'd like to thank our online

13   coordinators, Arlene Alexander and Dianne Mason

14   from the Disability Rights Office, for helping me

15   today.

16   There will be three panels in the

17   morning. Then we'll break for lunch. Lunch is on

18   your own.

19   There are two restaurants in this

20   building, and there's some out in the

21   neighborhood. Feel free to bring your lunch back

22   here and network.

1   We also have what we're calling an

2   overflow room from 9:00 a.m. to 2:00 p.m., and

3   it's down across from the exhibits. So, if you'd

4   like to get a group of your friends and have lunch

5   in there, you may do that.

6   After lunch, there will be a fourth

7   panel and then a roundtable. Each of the panels

8   will have short presentations by the panelists.

9   We've told them three to five minutes.

10   We're going to hold them to that because we have

11   so much we need to talk about today.

12   We have a timing clock to keep on track,

13   and moderator will be monitoring the time and let

14   you know when you have one minute left, and when

15   your time is up.

16   We have index cards at the entrance

17   table if you would like to submit written

18   questions in response to the panelists'

19   presentations. We will review them and attempt to

20   get to have time to address them, but if -- even

21   if we don't, we will follow-up with you if you

22   will give us your name and affiliation; and we

1   will respond to the questions after the workshop

2   is over.

3   We have some folks who are logged on

4   online, on our webinar, and the input today will

5   be put in the Broadband docket.

6   It's very important as each panelist

7   speaks, we will identify you at the beginning of

8   the panel, but then as you speak if you will also

9   give us your name.

10   We have a Court Reporter preparing a

11   transcript. We have people online and the

12   webinar, and if you will give us your name, then

13   everyone in the room will know who is speaking.

14   The microphones are not all on at once,

15   panelists. And that's why we keep indicating to

16   the sound room in the back to turn on our

17   microphones. So there may be a few seconds that

18   it takes for your microphone to get on, so the

19   audience will understand that, and you will

20   understand that. It will help us get along today.

21   There had been a number of changes to

22   the prepared and announced agenda that I would

1   just like to go over briefly here in the

2   beginning.

3   Richard Ray is not able to join us for

4   Panel 1, and have a last-minute acceptance, who

5   we've been trying to get since the very first day

6   of planning, and that is Richard Horne, Director

7   of the Division of Policy, Planning, and Research

8   from the Office of Disability Employment Policy at

9   the Department of Labor.

10   We also have some added monitored for

11   Panel Number 3. Jennifer Manner, the Deputy Chief

12   of the Public Safety and Homeland Security Bureau;

13   Ronnie Cho, also with the Public Safety Bureau;

14   Steve Midgely, the Education Director for the FCC

15   Broadband Team; and Juenge Fuvete, Workforce

16   Development Director of the FCC Broadband Team;

17   and Carrie McDermott, Health Care Analyst with the

18   Broadband Team.

19   We also have a substitution from the

20   announcement for Panel 3. Cheri Ferina in

21   California is not able to join us. We hope she's

22   online. Hi, Cheri. And Claude Stout, with the

1   Telecommunications for the Deaf and Hard of

2   Hearing, will represent the deaf and hard of

3   hearing community and the 911 Stakeholders'

4   Council on Panel 3.

5   We have a new monitor/moderator for

6   Panel 4. That will be Walter Johnson, who's the

7   Chief of the Electromagnetic Compatibility

8   Division of the FCC, and he will join Elizabeth

9   Lyle, Policy Advisor to the Broadband Team.

10   As Sherrese said, for the policy

11   roundtable that begins at 2:30 p.m., Commissioner

12   Copps will join us, and the moderators will be

13   Erik Garr, General Manager of the FCC Broadband

14   Team; Elizabeth Lyle, Policy Advisor, Broadband

15   Team; Mary Beth Richards, Special Counsel for FCC

16   Reform, Office of the Chairman; and Jennifer

17   Schneider, Legal Advisor to Commissioner Copps.

18   Sherrese Smith will also join for the roundtable.

19   I think -- one more addition. We have Joe Wazz,

20   Senior Vice President, Comcast, who will also be

21   joining the policy roundtable.

22   So I hope that takes care of the

1   housekeeping issues. And let's get started.

2   Panel Number One, we have folks who are

3   going to talk to us about leveraging federal,

4   state, and local resources to provide a way to

5   breach the barriers of affordability and

6   accessibility for people with disabilities in the

7   use of broadband and the Internet.

8   We have Gary Bojes of the Department of

9   Agriculture, Rural Utility Service; C. Marty

10   Exline, the Director of the Missouri Assistive

11   Technology Program; Richard Horne, Office of

12   Disability Employment Policy, the Department of

13   Labor; Jennifer Sheehy, Director of Policy and

14   Planning, Office of Special Education and

15   Rehabilitative Services, the Department of

16   Education; and Terry Weaver, Director, IT

17   Accessibility and Workforce Division, Office of

18   Governmentwide Policy, General Services

19   Administration.

20   We also have Daniel Weitzner, who's

21   Associate Administrator for the Office of Policy

22   Analysis and Development, Department of Commerce,

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 1   NTIA.

 2            Mr. Weitzner, would you begin, please,

 3   and then we'll go down the.

 4            SPEAKER:  We have some (inaudible).

 5            MS. KING:  Oh, you've worked a deal.

 6   Okay.

 7            MR. BOJES:  Good morning.  Good morning.

 8            MS. KING:  You're on.

 9            MR. BOJES:  Can you hear me?  Okay.

10   Yeah, I worked a deal to go first, because I'm

11   just a hog, a show hog.  I'm Gary Bojes with the

12   Rural Utilities Service, and I am energetic and

13   excited to be here and also humbled to be here,

14   energetic because you should hear that in my

15   enthusiasm as I present our programs, and humbled

16   because last time I was a participant, and I kind

17   of asked a question and posed a challenge, and now

18   I'm up here humbly presenting to you.

19            So I'll try to post that same challenge

20   at the end of my presentation.

21            But the Rural Utilities

22   Telecommunications Service has been in a program
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1   for a long time, building telecommunications

2   network since 1949. We have an infrastructure

3   loan program. We're basically a bank, if you

4   consider that, and we do have some grants.

5   We have an infrastructure loan program.

6   We have a broadband access loan program and

7   community connect grant program. We have a

8   distance learning and telemedicine loan and grant

9   program, and recently the American Recovery and

10   Reinvestment Act provided us some additional

11   funding to advance our broadband initiatives.

12   In 2009, we had 42 loans approved; 133

13   grants approved; $697 million in loans obligated;

14   and $48 million in grants obligated.

15   So we have a significant footprint, and

16   we've been doing that for a number of years, as I

17   mentioned.

18   Last year, we reached 187,000 rural

19   residents with new or improved service, and 153

20   rural communities, where they have community

21   grants and community access programs.

22   So we're pretty proud of that accomplish

1   that. And what I want you to think about is that

2   80 percent of America is rural, but it captures 20

3   percent of the American population. So whenever I

4   talk to someone here, I ask about your

5   constituency, and that would be 20 percent of our

6   population if it reflects the population at hand.

7   So what we're trying to do is reach into

8   that rural space and provide the infrastructure to

9   make sure that our rural cousins have the same

10   opportunities as our urban cousins. And that's

11   how we got started, and that continues to be our

12   mission.

13   Our telecommunications program budget

14   for 2010, in our traditional loan program we have

15   $690 million to lend, and our broadband loan

16   program we have $131 million to lend. Our

17   Community Connect grants is $13 million. Our

18   distance learning and telemedicine grants are $29

19   million, and as a result of the Recovery Act, we

20   got an increase in loans of $6 billion, and grants

21   of $1.4 billion.

22   So what we have is an infrastructure

1   that gets to your space, and what I'm encouraging

2   you to do we are giving preferences for those who

3   have partnered and show that they're partnering

4   with their communities.

5   So I'm asking everyone here to outreach

6   to their rural constituencies and say, find the

7   partner that's going to come here to apply for our

8   rural funding, and become one of their partners,

9   and hand-in-hand, we'll try to get accomplished

10   for you. Thank you.

11   MS. KING: Thank you. Next?

12   MS. SHEEHY: Is there still (inaudible)?

13   Are you done with Gary?

14   MS. KING: I mean what -- sure.

15   MS. SHEEHY: Hi. My name is Jennifer

16   Sheehy. I'm with the Department of Education,

17   Office of Special Education Rehabilitative

18   Services.

19   I just wanted to say it is so great to

20   see so many of you guys here and interested. I

21   was a little worried that in five minutes I

22   wouldn't be able to talk about all the amazing

1   programs that we have that can actually either

2   purchase technology to make broadband possible,

3   help with infrastructure, help with the policy,

4   but I see all -- a lot of our grantees and

5   representatives here in the audience, so I think

6   you will be hearing more detail about some of the

7   programs that we just help in funding throughout

8   the day.

9   In our office, we have three sub-offices

10   -- Office of Special Education Programs, the

11   Rehabilitation Services Administration, and the

12   National Institute on Disability and

13   Rehabilitation Research.

14   I'm going to very quickly go through

15   some -- just touch on the names of some programs

16   that those offices fund or administer so you just

17   have a sense of what's available.

18   Office of Special Education Programs

19   oversees the administration of the Individuals

20   with Disabilities Education Act. Part B of IDEA

21   can -- the funds -- that's about $13 billion and

22   the President gave through the Stimulus Act an

1   additional $12 billion.

2   This money can be used for

3   infrastructure costs to serve individuals,

4   students with disabilities, in partnership with

5   funding from other programs as long as students

6   with disabilities are represented in whatever the

7   project is -- the services that project is going

8   to deliver.

9   So that is certainly something people

10   should think about with regard to really building

11   up infrastructure to serve students, and also

12   students with disabilities.

13   Of course, we also run the Part C

14   program for students or young people with

15   disabilities, if infants to toddlers. And in many

16   cases, broadband is the way you can deliver

17   services in the natural environment to young

18   children. And Part B can pay for those services

19   for that access.

20   The Office of Special Education Programs

21   also awards grants to entities such as Bookshare.

22   And then we have the captioned and described

1   educational media project, recordings for the

2   blind and the dyslexic, and television access

3   projects that rely on broadband technology to

4   deliver their services and materials.

5   I think you'll be hearing a lot more

6   about those later. Under the Rehabilitation

7   Services Administration, I just want to mention

8   that we have the AT State Grants Program, and the

9   AT Projects not only lend money and provide

10   financial loans for assistive technology and

11   broadband access, but they can also act on behalf

12   of people with disabilities in their community

13   when there are discussions on policy and

14   infrastructure building or upgrading services not

15   only to people with disabilities, but to all

16   citizens in the community, but they can represent

17   disability interests.

18   Finally, we have the National Institute

19   for Disability and Rehabilitation Research. Three

20   projects that you'll hear more about later. One,

21   Rehabilitation Engineering Research Center on

22   Universal Interface and Information Technology

1   Access. And you'll hear from Gregg Vanderheiden

2   later. We have the RERC on Telerehabilitation.

3   Kate Seelman is here representing that group. And

4   we also have the Rural Rehabilitation Research

5   Training Center that's working on broadband access

6   and technology for people with disabilities.

7   And I'm not sure we have representatives

8   from there today, but you can learn more about

9   these initiatives on ed.gov's website, and I want

10   to give a shout out to Ken Wood, who is here from

11   NIDR, and Katherine Reese, who is here from our

12   office. And I believe Ken will be here most of

13   the day. Thank you very much.

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

15   Horne?

16   MR. HORNE: That was very good. Good

17   morning. I'm Richard Horne with the Office of

18   Disability Employment Policy at the U.S.

19   Department of Labor. We're a policy shop, not

20   necessarily a program shop.

21   But at the Department of Labor, I would

22   say the majority of our programs around workforce

1   development are necessarily stakeholders of the

2   broadband services that are represented here

3   across the board.

4   So it's really a pleasure to be here

5   mainly as a stakeholder. It's very critical that

6   our workforce development system gains access to

7   broadband as a way of providing workforce

8   development and training services. So the largest

9   program at the Department of Labor that is a

10   stakeholder here at this table would be our

11   Employment and Training Administration, which

12   administers what I call the One-Stop Career Center

13   Delivery System across the country, with the

14   one-stops our centralized locations where people

15   can go and get job training, job development

16   services, and certainly we want to make sure that

17   broadband accessibility is there for all their

18   customers, including individuals with

19   disabilities.

20   Another large program that I think would

21   be of interest, and Jennifer mentioned the

22   education of young people, we have several

1   programs that serve young people, including our

2   Job Corps program, of Job Corps Centers all across

3   the country that serve disadvantaged youth in a

4   variety of career and industries that are

5   necessary to the growing economy here in this

6   country; as well as our generic youth program that

7   is also part of the Employment and Training

8   Administration.

9   So I think that these are all

10   opportunities to try to figure out how do we bring

11   broadband into the menu of training services that

12   are available in the workforce development system.

13   We can certainly pay for those services, but

14   making sure that they're accessible to all of our

15   customers is going to be very critical.

16   And as I said in the previous panel, for

17   us, it's not only just the access to the

18   broadband, but it's what the broadband is

19   connecting to. So if the materials that are on

20   these trainings are not accessible, many of those

21   files or PDF files that are generally not

22   accessible to people with visual impairments or

1   disabilities, if we don't have correct captioning,

2   if we don't have video description for people who

3   are blind or visually impaired, all of these

4   things are going to be huge pairs to people with

5   disabilities not only getting in the band, but

6   playing the music, for lack of a better

7   description.

8   So, you know, my plug is to -- when this

9   is being developed, be inclusive. And it's much

10   easier on the input side to make this thing

11   accessible than to try to fix it once it's already

12   there and it's not out there. Then when that

13   happens, you know, if someone tries to come and

14   take advantage of your services and they can't get

15   access to it, they're just going to go to another

16   channel. And there you've lost a customer.

17   So we're available to provide resources

18   that can help you make these things accessible.

19   There are many federal agencies, and, as Jennifer

20   said, many projects funded by OSERS that are there

21   to provide the technical assistance, training, and

22   the models of what works that can make this happen

 1   for all of us. Thank you.

 2   MS. KING: Thank you. Ms. Weaver?

 3   MS. WEAVER: Good morning. Okay. I

 4   just making sure I was on.

 5   Hi. I'm Terry Weaver. I'm from GSA,

 6   and GSA -- excuse me -- GSA is a -- has been for

 7   the past -- well, actively since the last nine

 8   years since Section 508 was put in place is very

 9   active in ensuring the Federal Government's

10   technologies -- its websites, the technology it

11   uses, the information it uses in that environment

12   -- meets the requirements of Section 508.

13   And for those, just a brief refresh on

14   what 508 is. Section 508 was a law that was

15   passed to ensure that the Federal Government makes

16   sure its technologies work for people with

17   disability as well as for people without

18   disabilities. There's no equal -- no separate

19   accommodation. You should go to a government

20   website and get the same information if you have a

21   disability as if you did not have a disability.

22   So what the law also said, interestingly

1   enough, was that all the technology the government

2   develops, uses, maintains or procures needs to

3   conform to the standards. And the Access Board --

4   I think David Capozi will be here later this

5   afternoon -- is responsible for these standards.

6   They put out the original standards that took

7   effect in 2001, and they've been leading the

8   refresh -- and I see a lot of familiar faces from

9   that effort here -- on the new standard, which

10   will be coming out in the next couple of years.

11   That's David's discussion.

12   But the key part of this is that we've

13   been living with this and enforcing it and

14   building tools that ensure the Government is

15   living this way.

16   What becomes important is that at GSA we

17   are the largest procuring organization in the

18   Federal Government. Well, not the largest,

19   because Defense buys a lot more missiles, but

20   let's stay out of the missile territory.

21   As such, we influence what manufacturers

22   create and because they don't want to make a

1   government version as well as a general population

2   version.

3   So by us requiring accessible

4   technologies, accessible products and services in

5   our solicitations, we are driving the effect

6   forward of making sure that the technologies

7   everybody can buy will be more extensible.

8   One thing we've put in place a couple

9   years back is a very large contract called Networx

10   -- N-E-T-W-O-R-X. And Networx is the major

11   telecom contract for the Federal Government.

12   Agencies will use that to get all their services,

13   including broadband.

14   So what we were very successful in doing

15   was to make sure that when they put that contract

16   out, they had the requisite 508 language in there

17   to ensure that the services that they were

18   procuring would meet 508, and, therefore, you

19   wouldn't have issues of routers stripping out

20   essential things that would make TTY or other

21   communication devices not work properly, and

22   things we've had in legacy buildings and systems

 1   for a long time.

 2   So we are continuing within the GSA to

 3   support very strongly the implementation of

 4   Section 508. We have lots of tools out on Section

 5   508.gov to help agency purchasers as well as -- we

 6   work with states who also adopt and support

 7   Section 508 on their own. And we have training

 8   and we do conferences.

 9   So we're really pushing them at moment.

10   MS. KING: Thank you. Mr. Exline?

11   MR. EXCLINE: Hello. I'm Marty Exline.

12   I'm the Director of Missouri Assistive Technology,

13   which is one of the assistive technology programs

14   that Jennifer had mentioned. There's one in every

15   state. They're administered under the Rehab

16   Services Administration.

17   In addition to the assistive technology

18   programs, there are several state programs that

19   also administer the telecommunications equipment

20   distribution programs. There's about five that

21   also administer those programs. And Missouri is

22   one of those.

1   In Missouri, the program is funded under

2 the Relay and Equipment Surcharge on telephone

3 lines -- a $.13 surcharge on each telephone line.

4 In some other states, it's funded through the

5 Universal Service Fund.

6   And most states have programs like

7 Missouri. Traditional adaptations for telephones

8 are covered, things like amplified phones, TTYs,

9 voice activated phones, large button phones with

10 persons with visual impairments.

11   But Missouri is somewhat unique in that

12 we're the only state to also cover devices and

13 software needed for Internet access, for instance,

14 things like screen reading software, screen

15 enlarging, alternative keyboards, alternative

16 mice, pointing devices, Braille output for persons

17 who need that as far as accessing the Internet and

18 e-mail.

19   We have probably as far as the Internet

20 side about 66 percent of the equipment provided

21 serve persons with vision impairments or who are

22 blind; physical disabilities, about 19 percent;

1   and then intellectual- related disabilities, about

2   16 percent.

3   The one key part of the program that has

4   turned out to be just absolutely necessary is we

5   have a state-wide network of consumer support

6   providers for that program, because it is tough

7   for a consumer to know, first of all, what they

8   need. It's a little bit more complicated

9   sometimes the adaptive telephone equipment; also

10   to provide help if they need help with

11   installation, and then also to provide training at

12   the individual needs help on how to use the

13   software or the equipment.

14   The eligibility criteria -- there's no

15   cost to the individual with a disability. The

16   income guidelines are pretty generous. For one

17   person or two, the income guidelines are under

18   $60,000 a year, and then for each additional

19   dependent, it goes up from there. So for each

20   additional person you have in your family, there's

21   a higher income limit.

22   In a nutshell, we did start this program

1   through state legislation. Many of the programs

2   are, as I mentioned, funded through the Universal

3   Service Fund. So certainly at the state level

4   there are opportunities for coverage of equipment

5   and software absolutely needed to access the

6   Internet.

7   MS. KING: Thank you. Daniel?

8   MR. WEITZNER: Thanks very much. It's a

9   pleasure to be here. My name is Danny Weitzner.

10   I'm with the National Telecommunications and

11   Information Administration.

12   My thanks to the Commission for

13   organizing this important event and for including

14   us, and thanks to all of my colleagues for all the

15   inspiring work you're doing.

16   NTIA is the President's principal

17   advisor on telecommunications and information

18   policy, so allow me to just start at the top line

19   for a moment.

20   I think what brings us all here and

21   certainly what drives administration efforts in

22   this regard is an effort to make sure that we are

1   really providing broadband Internet access to all

2   citizens of the country throughout the country

3   regardless of where they live, regardless of the

4   abilities that they bring to Internet access.

5   It's critical that we are able to

6   connect people to the economic opportunities, the

7   social opportunities, the educational

8   opportunities, the political opportunities that

9   the Internet and broadband technologies offer.

10   So how do we do that? Obviously we

11   begin by working very hard, and the Commission's

12   Broadband Plan is a critical step in this regard

13   to increase access to broadband Internet services.

14   It's important as well to assure that

15   we're creating opportunities for the creation of

16   new content and new services that are relevant to

17   the diversity of the population of the United

18   States. What we know from recent surveys is that

19   some of the people who are not participating in

20   the Internet are not participating, according to

21   their own reports, because they don't find

22   relevant content or services, relevant

1   opportunities. So it's important to address that

2   side as well.

3   From our perspective, a key to creating

4   opportunities for new content and new services is

5   to build on open platforms and open standards, as

6   many of my colleagues have mentioned. I think

7   that with regard to access for people with

8   disabilities, we have a really inspiring lesson

9   from all the technology development work that's

10   gone on in the Internet and the World Wide Web,

11   where when we build on top of open standards, when

12   we employ universal design approaches, as many

13   have suggested here already, we increase

14   opportunities. We reduce costs and make sure that

15   we can really realize the vision of having an

16   Internet that's accessible to all.

17   Let me talk very quickly about NTIA's

18   role in realizing these goals. And it's --

19   quickly it's really it's we have an operational

20   role, a policymaking role -- a policy research

21   role, as well as a quantitative research role.

22   My colleague from RUS mentioned some of

1   the broadband grant and loan opportunities. We're

2   partnering with RUS in the BTOP, Broadband

3   Technology Opportunities Program, which will over

4   the next few years give out upwards of $5 billion,

5    $4.7 billion, in broadband grants.

6   We certainly hope that some of those

7   grants, which are quite open ended opportunities

8   to serve people in underserved and unserved areas,

9   that some of those grants will concentrate on

10   developing innovative approaches for access and

11   services for people with disabilities.

12   Since my time is up, I want to just

13   highlight one other role that we think is very

14   important. We're working very hard, the FCC is

15   working very hard, on making sure that we have

16   good data about the way that people use broadband

17   services, people who don't have broadband

18   services, understanding why people who don't have

19   service have that service, and certainly

20   understanding the particular needs of people with

21   disabilities and that research agenda is

22   important. And it's an area in which we really

1   would encourage this community to participate.

2   We're at the beginning of a new phase of

3   extending access to the Internet, and we have the

4   opportunity to really understand how to close the

5   gaps that we see and hope to be engaged with all

6   of you in that process. Thanks very much.

7   MS. KING: Thank you. Elise, would you

8   like to add some follow-up questions?

9   MS. KOHN: I want to thank -- I'm Elise

10 Kohn. I'm the Adoption Director on the FCC

11 Broadband Team, and I'll be working closely with

12 Elizabeth Lyle and all of our team to make sure

13 that all Americans have affordable access.

14   And so we are particularly interested in

15 hearing from the people with disabilities

16 community so we understand all the issues and

17 address them accordingly.

18   I wanted to thank Danny for giving me a

19 commercial, first of all to, or an intro to

20 emphasize our need for data and to leverage just

21 something that Marty had said you have data of how

22 your program is being used, and, to the extent

1   that you can submit that into our record, that

2   would be very helpful.

3   And then I wanted to open up a question

4   up to all of the panelists. We've heard a lot

5   about what your agencies are doing. What I want

6   to know is what we can do to help you.

7   So when we develop the plan, what are

8   the recommendations that we should put in to make

9   sure that you can do your jobs better in terms of

10   ensuring access?

11   MS. KING: Jennifer?

12   MS. SHEEHY: Yeah. Sure. Thank you

13   very much. That's a great question. And thank

14   you for asking it.

15   Honestly, I would suggest to include our

16   stakeholders and our grantees. They are -- have

17   the expertise in the area. You heard Marty talk

18   about data. We have 50 states that can provide

19   you with that information, and we also collect

20   data on some uses of our funds regarding broadband

21   and technology, and we can just partnered together

22   and just make sure that ongoing, outside of these

1   hearings, that we can work with you guys and give

2   you what you might need to make some policy

3   decisions. Thanks.

4   MR. HORNE: I would agree with Jennifer.

5   I think that we can offer to partner with you in

6   terms of making sure that what evolves in the

7   strategy is applicable in the context of workforce

8   development. I think in the end, these are all

9   tools towards getting employment, and I think that

10   that's critical for our stakeholders. We, again,

11   we've got the One-Stop Career Center System across

12   the country that are going to be natural partners

13   and probably co-locators for some of this.

14   I can certainly go back and try to get

15   some information about the extent to which the

16   centers themselves are using broadband,

17   particularly in rural areas, to provide job

18   training services.

19   But again, I think that if your

20   recommendations are also focused on employment, I

21   think that's going to be critical.

22   MS. KING: Daniel?

1   MR. WEITZNER: I'd just stress the

2   importance of open infrastructure and open

3   standards. I think that we see in the Internet an

4   example of how powerful and what innovation

5   opportunities, as the Commission well knows, can

6   be created on top of open technology.

7   I think that given the wide range of

8   needs for people with different kinds of

9   disabilities, as my colleagues on the panel said,

10   if you have to build those over and over and over

11   again -- oops -- with -- for each particular

12   needs, costs go up to the point that the

13   opportunity to really, really I think unacceptably

14   limited.

15   So, as the Commission knows, there are

16   lots of reasons why open standards encourage

17   innovation. But I think this is an area in which

18   there's tremendous social benefit to be gained

19   from assuring that we have these kinds of

20   platforms.

21   MS. WEAVER: This is Terry Weaver. I

22   think another good aspect is actually using your

1   position to communicate the importance and tying

2   it to reality. So as this administration has been

3   very being in adopting new social media platforms,

4   these all require broadband. You can't do it on

5   dial-up, you know.

6   And by not using or providing broadband

7   to people, they're getting left out of the

8   conversation. So, to the extent you can carry

9   that message forward, that would be important.

10   MR. EXCLINE: In terms of the state

11   assistive technology programs, there is data being

12   collected nationally on the types of services that

13   the state programs provide and the types of

14   disabilities that take advantage of those

15   services, not directly to broadband, but certainly

16   there is data in there that I think would be

17   useful to the Commission in terms of actually

18   getting a better hand hold on exactly what the

19   programs are doing and what kinds of individuals

20   they're working with.

21   MS. KING: Gary?

22   MR. BOJES: Yes. Thank you. The one

 1   thing that I see that is critically important is

 2   the sustainability of the system. So once we put

 3   it together and we all figure that out, we need to

 4   be able to help those afford it, to keep it going.

 5   So I would be looking at the outreach to

 6   the underserved could be an economic issue, and

 7   helping that economics provide sustainable and

 8   feasible revenue streams for those who are putting

 9   these projects and need to keep them going or keep

10   them with the improvements that technology is

11   advancing at the rates that they are.

12   MS. KOHN: Before I go into my next

13   question, I want to reiterate to the (inaudible)

14   of the panel in terms of we will -- we are taking

15   questions from the audience. There are note cards

16   on the table, and we are taking written questions

17   to be clear.

18   So if you have questions, please make

19   sure that they're on the note cards and passed in,

20   and we will collect those.

21   MS. KING: And if you need assistance in

22   creating your written questions, we have staff

1   people that are available if you would just raise

2   your hand.

3   MS. KOHN: Another question that I had

4   while we were looking for questions from the

5   audience is, you know, I asked what we could do to

6   facilitate the goals of each of your agencies, but

7   in general, based on your experience in dealing

8   with people with disabilities, what -- can you

9   help us think about how we should prioritize when

10   we come up with solutions in terms of whether it

11   is prioritizing universal design standards,

12   investing in adaptive technology development,

13   reducing the costs of equipment.

14   I mean there's a lot of potential

15   solutions out there, all very important, but do

16   you have thoughts on how we should prioritize

17   among these solutions?

18   Marty, it seems you might have the best

19   -- most relevant experience here.

20   MR. EXCLINE: I would answer yes.

21   That's very tough. Obviously, universal design is

22   extremely important that products are made so

1   everybody can use them. In situations where that

2   may not be possible, there does need to be more

3   resources provided to assistive devices.

4   So it's very tough to prioritize. I

5   mean it really is. Everything that you mentioned

6   is absolutely essential. So that doesn't help

7   much, but.

8   MR. BOJES: I think that when each of us

9   communicates through the lenses that we have the

10   abilities to connect with, I would ask that if we

11   can encourage the participation so that those

12   decision-makers and those who are putting together

13   the economic plans understand the lenses that we

14   all have to interpret and communicate.

15   MS. KOHN: In terms of each -- do you

16   feel that your programs are being taken advantage

17   of to the fullest extent. I mean so there are

18   existing pools of money obviously through the

19   grant process that we're in the middle of right

20   now.

21   Are you seeing what you would consider

22   sort of a representative sample of applicants from

1   institutions or groups that will be helping people

2   with disabilities? Are you seeing kind of your

3   standard funds being taken advantage of? Or is

4   there more we can be doing to make sure that

5   people are taking advantage of existing resources?

6   MR. WEITZNER: I can say just as to the

7   grant programs, we're right in the middle, as you

8   said, of our selection process, so, A, I'm limited

9   in what I can say, and, B, we don't know actually

10   everything about the applications.

11   But it's certainly something that we'll

12   look at closely and we are in the process of

13   working out mechanisms to be as transparent as

14   possible about obviously the grants we award, the

15   information we have about who's being served by

16   those grants.

17   So it's not a completely satisfying

18   answer to your question, but I think there will be

19   a lot of opportunities to look at the data from

20   our program, from the RUS program in order to

21   understand what needs are being served and what

22   needs are not and what institutions might think

1   about stepping up and trying to take more

2   advantage of the opportunities available.

3   There will be at least one more round of

4   BTOP funding available, so there's still certainly

5   opportunity for institutions in this community to

6   take advantage of that, I'd stress that the

7   applications are well targeted on unserved and

8   underserved areas really are quite open in what

9   they're able to fund.

10   We're seeing applications in

11   telemedicine and other healthcare applications and

12   a variety of educational applications, and energy

13   efficiency applications -- just a whole range of

14   particular applications.

15   And so I think there's quite a bit of

16   opportunity over the next year.

17   We'll -- just to calibrate, we will have

18   our second round solicitation out somewhere

19   towards the end of this year, beginning of 2000 --

20   MS. SHEEHY: I think the only thing I

21   would like to add is that I think in general

22   Federal agencies don't do a good job of outreach

1   and dissemination of information, and I know

2   we're, our office, could really use help.

3   I mean we have parent training

4   information centers that reach out to parents of

5   young people with disabilities and other, you

6   know, families can know about these programs and

7   the assistive technologies state grants program

8   there.

9   You know, we have limited funding, but

10   the information is available to anybody who could

11   access it. So if you could do a -- you know, help

12   us just get the word out and disseminate

13   information on our programs that could be of

14   assistance, that would be terrific.

15   MS. KOHN: Before -- I want to give you

16   a chance to answer -- I just want to remind

17   speakers if you can please state your name as you

18   take the microphone to answer questions, that will

19   be helpful. I mean, Terry, did you have something

20   to add?

21   MS. WEAVER: I have. This is Terry

22   Weaver, and my comment is going to be in one sense

1   what we are involved with in GSA is different than

2   your mission, but where we overlap is on the

3   requirements and dependence on manufacturers and

4   industry to deliver the services and the products

5   that we need so that I think where we need is the

6   consistent message coming out from the Federal

7   Government at all levels that it values the

8   importance of accessibility and that it values it

9   in 508. It values it in 255. It values it in

10   what it puts in and sees in terms of how they want

11   to lay out broadband that this is something that's

12   important.

13   And that clear message as a unified

14   front I think is very important for us.

15   MS. KOHN: Um.

16   MR. BOJES: I have a couple examples,

17   again, as was mentioned, that we are in the middle

18   of the process. I'm Gary Bojes with the RUS.

19   In our telemedicine program, you know,

20   we're trying to put clinics and hospitals in hard

21   to reach places, visiting nurse programs,

22   diagnostic mobile PCs and mobile health units and

1   ambulances that would link to local clinics and

2   hospitals.

3   So I see that as all being potential

4   uses. The distance-learning examples are

5   connecting schools, accessing instructional

6   programming, so special programming; sharing

7   teacher resources and delivering specialized

8   continuing educational courses; also offering

9   technology and the job training.

10   So we're all kind of partners in here.

11   We've actually funded these kinds of programs

12   through our grants.

13   MS. KOHN: I want to go to one of our

14   questions from the audience. Terry, this is

15   probably coming your way.

16   Although Section 508 has been law for

17   several years, we consistently see government

18   videos from the government that are not captioned

19   on the Internet and Federal web pages that are not

20   accessible. What more can be done to step up

21   compliance with Section 508?

22   MS. KING: And, Terry, I'd like to just

1   add the issue of the PDFs not being accessible to

2   screen readers, and yet the Federal Government

3   still supports the applications that provide the

4   PDF documents.

5   MS. WEAVER: Yeah. Okay. This is Terry

6   Weaver, and the content of PDFs and content of

7   what's posted on the web in general is still very

8   important. I know a lot of companies have gone

9   out, in fact, in a lot of the trainings that

10   agencies are doing for Section 508, they are

11   pushing the use of tools that make accessible

12   PDFs. There's a place for PDFs, but they need to

13   be accessible. Most -- it's a lot of it's in

14   education awareness at a level. People just don't

15   get it.

16   We're also pushing very strongly about

17   the increased use of videos, and awareness of 508.

18   We're being reassured that the OMB, Office of

19   e-Gov, and the CIO, Federal CIO, are aware of

20   this, and they're going to start -- be pushing and

21   being more aware and pushing for accessible

22   videos.

1   I would suggest anybody who sees a video

2   or content that's not accessible, let the agency

3   know. A lot of the agency pages are huge. And

4   things get out there, and they just -- they are

5   not known that they're out there. So give -- you

6   know, send an e-mail into to the Webmaster. Give

7   me a chance to correct it.

8   MS. KOHN: As a follow-up to that, in

9   terms of dealing with industry on this front, is

10   there -- are you finding it difficult to have

11   industry comply in terms of procurement?

12   MS. WEAVER: I don't have insight to the

13   procurement proposals that are submitted.

14   MS. KOHN: Right.

15   MS. WEAVER: I do look and study my team

16   checks and see what we're asking for. And so what

17   we've been doing is we can't ask industry to do

18   something we're not requiring of them in our

19   contracts, and we've been studying now for about

20   two and half years all of the solicitations that

21   are posted on Fedbizopps. And we're finding that

22   when we started the process, over 80 percent of

1   them were extremely deficient in the language

2   requirements of Section 508.

3   And that's gone down. We're down to

4   someplace around 60 percent, and that's not good,

5   you know. It's a lot to do with the -- how

6   distributed the whole procurement process is, and

7   when you're trying to educate every person who can

8   write a requirement, it's pretty challenging.

9   But we've got -- we started getting

10   attention back because we send out letters now to

11   those we find on the -- when we do our sampling

12   and say, hey, by the way, you've come up in our

13   sample, and you're not -- you're missing the point

14   here; you need to do this in your solicitations.

15   And we're seeing an improvement because

16   of that.

17   MR. HORNE: This is Richard Horne from

18   DOL. One of the other partnerships we could

19   probably offer you is that the Department of Labor

20   oversees the Office of the -- of the OFCCP, the

21   Federal Contracts Compliance Office.

22   So we work with all of the Federal

 1   contractors, and we have an industry liaison

 2   group, and there's certainly probably an

 3   opportunity there to start working with the office

 4   that oversees these Federal contractors to get

 5   this dialogue into the dialogue that we have with

 6   these businesses on a daily basis.

 7   So that's probably something I'd like to

 8   follow up with you on.

 9   MS. KOHN: That will be great.

10   MR. WEITZNER: I could just speak to

11   this as user agency. I agree with Terry that the

12   procurement process is critical. I think really

13   most important is to get these features, whether

14   it's captioning or other kinds of accessible video

15   technology, automatic transcript creation, et

16   cetera, it's critical to get these technologies

17   into the commercial technology mainstream.

18   As a relatively small agency who

19   ironically is working very hard to fulfill the

20   Obama administration transparency mandate, you

21   know, we try to webcast more. We try to put up

22   more videos. And what that does is it reveals the

 1   difficulty of doing this.

 2   We recently webcasted a small advisory

 3   committee meeting. I had to have three different

 4   contractors involved -- one to do one part, and

 5   one to do another.

 6   And it's not to complain, but it's just

 7   a suggest that if we're going to have broadly

 8   accessible content on the web, whether from

 9   government or non-government sources, we really

10   have to work towards moving the entire industry in

11   that direction to encourage that direction,

12   because, of course, it's as important for

13   non-government uses as for government uses.

14   And I think that the Commission, through

15   its bully pulpit role here in the Broadband Plan

16   could really help put out the benefit of broad

17   progress in this direction for all users.

18   MS. KING: We have about five more

19   minutes.

20   MS. KOHN: I sure feel that we have

21   about five more minutes, and at least three

22   questions.

1   But to follow up on what you were

2   saying, Danny, and one of our questions was that,

3   you know, so much of Web 2.0 is currently not

4   accessible, and how do you encourage accessible

5   open architecture.

6   And you obviously mentioned the FCC's

7   bully pulpit role here. Are there any other ways

8   than any of you suggest in terms of methods for us

9   encouraging that kind of (inaudible)?

10   MR. WEITZNER: Well, I think that for

11   what we could do here I think leading by example

12   is critical. I think the GSA efforts have made a

13   huge difference in -- over time in the 508

14   process, and, as Terry mentioned, the -- I know

15   that the CIO's Office is looking very, very hard

16   at this.

17   Again, it's part of a broader emphasis

18   on open standards and transparent accessible data.

19   I think that the extent to which we move in that

20   direction broadly will get benefits in the

21   accessibility area in particular.

22   MS. KOHN: Jennifer, the issue is raised

1   that -- in one of our last workshops about how do

2   you ensure that educational services delivered

3   through the Internet, such as distance learning,

4   home school, are fully accessible to people with

5   disabilities, and what is the -- how do you do

6   that?

7   MS. SHEEHY: Well, that's interesting.

8   The whole policy discussion around H1N1 has

9   brought this really to light because kids who are

10   high risk for infecting and being infected --

11   sorry -- are recommended to stay home. And how do

12   you deliver educational services and not interrupt

13   the learning while kids are, you know, in and out

14   of school.

15   So one of the things that we're doing is

16   trying to get information out about how services

17   can be delivered remotely in an accessible way to

18   children in schools, and we're putting out

19   guidance shortly on H1N1 that I think is going to

20   be relevant for distance learning at least in K

21   through 12, when kids need it and for home

22   schooling.

1   But we're also looking at preparing

2   teachers to deliver educational services in

3   distance learning mechanisms and modes, because as

4   teachers go to school, they learn how to teach,

5   but they don't necessarily learn how to teach in a

6   distance learning environment.

7   So we're trying to do that.

8   MS. KOHN: This will be our last

9   question, I think, and again, I just remind all of

10   you to please state your name before answering.

11   The FCC must report annually on whether

12   broadband is being deployed to all Americans. How

13   should we go about this aggregating data regarding

14   people with disabilities? You know, what

15   categories and subcategories make sense?

16   We wanted a good one for the last one.

17   It isn't easy.

18   MR. HORNE: As the resident researcher

19   at the Department of Labor, one of my prime

20   responsibilities was developing disability

21   questions for the Current Population Survey, which

22   measures the employment situation for Americans

1 here.

2   It took us 10 years to get questions

3 into the Current Population Survey.

4   MS. KOHN: You have 120 days. I just

5 want to --

6   MR. HORNE: -- to measure. Yeah. I got

7 that. I got. I got -- yeah, I'm just --

8 definition matters.

9   And when you look across, you know, 300

10 Federal programs, you're going to find 300

11 different definitions of disability, and if you

12 put 10 people in a -- I guess if we just went

13 around the room and asked everybody to give their

14 definition of disability, you'd probably not have

15 a lot of consensus.

16   So you can follow the broad definitions

17 of disabilities under the Americans with

18 Disabilities Act or you can follow the narrow

19 definitions of disabilities under statutes such as

20 IDEA and the Rehab Act.

21   You're probably going to -- you'd

22 probably get -- you're going to come up with some

1   kind of hybrid, because the more categories you

2   have, the more disparate the data is going to be,

3   and it's really not going to tell you a great deal

4   about who you're serving or not serving.

5   So do you stay at a very high level

6   with, you know, limited number of categories to

7   capture the greatest amount of data is what you're

8   going to have to think about.

9   MS. KOHN: Danny?

10   MR. WEITZNER: Could I just do -- Danny

11   Weitzner, NTIA -- just a brief commercial for an

12   event we're having next week. We're having a

13   workshop on broadband data transparency, which is

14   a first engagement with the academic research

15   community, looking at broadband issues generally

16   speaking.

17   We'll be talking about the kind of data

18   we think we're going to have in the coming years.

19   We'll be talking about -- we have a -- we had also

20   that 10-year wait on the CPS. Actually, the

21   Census was --

22   MR. HORNE: Sorry about that.

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 1              MR. WEITZNER:  -- fantastic.  No, and we

 2      managed to squeeze in a little bit more quickly.

 3      But seriously, this is a first opportunity to

 4      engage on the questions of the data that we'll

 5      have coming out of NTIA, the Census questions that

 6      we'll be asking over time, the broadband mapping

 7      effort that we're doing, together with the FCC.

 8              So we'd certainly love to have input

 9      into that process, and I can provide information

10      to anyone who's interested.  Richard, you're

11      already signed up.  You don't know it.

12              MR. HORNE:  Oh, okay.

13              MS. KOHN:  On that note, I mean

14      obviously the FCC and NTIA, there are data

15      collection efforts that (inaudible) not so be

16      going -- are there more that we should be

17      requiring of different agencies that are serving

18      people with disabilities?

19              Is there more data specifically with

20      respect to broadband access for people with

21      disabilities that each agency should be collecting

22      or does that not make sense to do it separately?
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1   MR. HORNE: Yeah. This is Richard Horne

2   from Labor. An opportunity that we're going to

3   have in 2012 is an opportunity to do what we call

4   a disabilities supplement to the Current

5   Population Survey.

6   In the current Survey, you can only ask

7   a limited number of questions. You're only going

8   to get so many opportunities, and we were lucky to

9   get six questions in.

10   The Supplement will allow us to go very

11   deep, and so if you would again another

12   partnership might be a few questions that you

13   would all be interested in us asking in a

14   supplement to the Current Population Survey, which

15   might get you even more data. I love data.

16   MS. KING: We want to thank you all very

17   much, panel number one, and we'll take a

18   five-minute break, and you can stay where you are

19   until after panel number two or you may take

20   another seat.

21   (Recess)

22   MR. HORRIGAN: Thanks, everybody, for

1   taking a seat so we can get underway for our

2   second session this morning.

3   My name is John Horrigan. I'm the

4   Director of Consumer Research here at the FCC for

5   the National Broadband Plan. I caught the tail

6   end of the prior session, and was very pleased to

7   hear discussion of the six questions developed

8   over many years to measure people with

9   disabilities in surveys.

10   We are going to use those questions in

11   the survey that we have in the field to look at

12   broadband usage, barriers to broadband uptake in

13   the United States. So I'm interested to be part

14   of this session to learn more about these issues.

15   So how we are going to proceed is each

16   presenter will have about three to five minutes to

17   make a presentation. I think a chime will go off

18   after three minutes to notify you that the

19   three-minute mark has been hit. So you'll have

20   then a minute or so after that to wrap up.

21   I'm not going to go through lengthy

22   introductions of each panelist, but I would like

1   each presenter to identify himself or herself so

2   that everybody knows who's speaking as we go

3   around.

4   So without further ado --

5   SPEAKER: Questions from the audience.

6   MR. HORRIGAN: -- yes. Questions. We

7   will have questions from the audience, and how

8   we're going to proceed with that is have people

9   fill out cards, and the cards will be handed up

10   here to us for us to ask the questions once we get

11   to the Q&A period.

12   So, now I think without further ado,

13   we're going to start with Rebecca Ladew, and we're

14   going to proceed from Rebecca down the panel

15   toward Rosaline and Eric. Jim Tobias is going to

16   be our clean-up hitter. We're not forgetting Jim,

17   but he will go at the end after everybody has

18   gone.

19   So, Rebecca.

20   MS. LADEW: [Interpreted.] Hello. And

21   I live in Baltimore, Maryland. I have a Master's

22   Degree in Instructional Technology from Towson

1   University. I'm associated with the Speech

2   Communications Assistance by Telephone, Inc.,

3   started by Dr. Seagleman of California.

4   The ability and freedom to communicate

5   with others, whether spoken or written, is

6   something most people take for granted. People

7   with communications disabilities were not able to

8   communicate outside of their own immediate world

9   until telecommunications relay services came along

10   as a part of the Americans with Disabilities Act

11   in 1990.

12   Speech-to-speech relay, a form of TRS,

13   made the use of the telephone system possible for

14   people with speech disabilities. Now they can

15   take care of routine matters, such as making

16   doctor's appointments, making business calls,

17   ordering pizza or Chinese food, calling friends

18   and relatives, et cetera.

19   Speech-to-speech relay has made even

20   calling 911 for emergency situations possible.

21   There are two relay services that people

22   with speech disabilities can use.

 1   Speech-to-speech relay and hearing carryover

 2   relay. With speech-to-speech relay, you can use

 3   your voice and hear at the same time, but have a

 4   communicating agent re-voice what you say

 5   verbatim, like real-time telephoning.

 6   For hearing carryover relay, the voice

 7   of a person with a speech disability is not heard,

 8   but that person can hear the party they called,

 9   and then the person with a speech disability can

10   type back to the communication agent what they

11   want to tell the other party.

12   A TTY and a speakerphone are used for

13   this type of relay service. We have petitioned

14   the FCC to recognize Internet-based

15   speech-to-speech relay, making it possible to use

16   video-assisted speech over broadband and a

17   computer.

18   This is an open proceeding at this time.

19   People with speech disabilities have two things

20   going against them when communicating verbally,

21   and they are having trouble speaking and being

22   understood.

1   Therefore, it is with much hesitation

2   that people with speech disabilities use the

3   telephone. There are many varieties of speech

4   disabilities, and many speech-disabled individuals

5   have other disabilities as well, and some use

6   wheelchairs.

7   Some speech-disabled individuals do not

8   have the cognitive or manual skills to use a

9   telephone or a computer keyboard. For those who

10 lack the manual skills, a pointer or stick may be

11 used to strike a key on a computer keyboard. This

12 same method is also used to dial a number on a

13 telephone.

14   Also, a switch may be used to manipulate

15 signals on a computer screen.

16   A variety of adaptive augmentative

17 communication equipment is available for people

18 with speech disabilities to use. Some are more

19 sophisticated than others, because you can program

20 sentences that are apt to be used in everyday

21 conversation, or you can even program an entire

22 presentation or speech.

1   With the click of a key, the sentence or

2   presentation or speech is spoken. Some of the

3   more sophisticated adaptive augmentative

4   communication equipment can be connected to a cell

5   phone for a direct call using certain programmable

6   keys for certain conversations. For example, hey,

7   how are you.

8   Users of this equipment often called

9   through speech-to-speech relay so the

10   communications assistant can manage the call and

11   ensure that the other caller understands and

12   respects the turn-taking process.

13   If the user has a laptop/notebook

14   computer that is designed specifically for users

15   with speech disabilities who use an adaptive

16   augmentative communication device, the equipment

17   will have a PC wireless card making it possible

18   for the speech-disabled individual to make relay

19   calls.

20   A simpler device that uses pictures or

21   signals is used by those speech-disabled

22   individuals with cognitive disabilities.

1   You can connect these simpler devices to

2   most cell phones, however, these can be used --

3   you cannot connect these simple devices to most

4   cell phones. However, these can be used when

5   calling a relay service used by speech-disabled

6   individuals.

7   What I'm attempting to explain is that

8   it takes an enormous effort and time for a

9   speech-disabled individual to communicate, and

10   sometimes time is of the essence, such as when one

11   is trying to access 911.

12   A speech-disabled individual, just like

13   most people, becomes more excitable and frustrated

14   in an emergency situation, but this excitement

15   makes their speech more difficult to understand.

16   It would greatly enhance such opportunities to use

17   video-assisted speech over broadband.

18   There are typical barriers for people

19   with speech disabilities. One, many individuals

20   with a speech disability don't have telephone

21   equipment that they can use at all. They may need

22   a speakerphone, headset, TTY, or other new

1   emerging technologies.

2   As Internet-based telephone use grows in

3   the speech-disability community, there will be

4   more new kinds of equipment needed that are

5   accessible and useable.

6   Two, many speech-disabled individuals

7   lack the dexterity to use the telephone even with

8   special equipment. If special equipment is not

9   made available for people with special needs, such

10   as people with speech disabilities, there would be

11   no access to telephone-type communication even for

12   calling 911.

13   Three, some speech-disabled individuals

14   cannot afford to have a telephone service, much

15   less broadband and computer.

16   Four, if a speech-disabled individual

17   had access to 911 through speech-to-speech relay,

18   because the 911 operator can't understand their

19   speech, the speech-to- speech relay answer time

20   may be too long for the emergency situation.

21   Also, depending on the emergency

22   situation, accessing 911 via hearing carryover

         1   relay would also take a long time to explain the

         2   type of emergency situation because the

         3   communication agent would have to wait until the

         4   user typed his or her message. And the user with

         5   a speech disability may be a slow typist.

         6   This could be made easier with

         7   video-assisted communication over broadband and a

         8   computer.

         9   Five, many speech-disabled individuals

        10   do not think that the 911 operator will understand

        11   them, and they do not know that they can access

        12   911 through speech-to- speech relay. They assume

        13   that 911 is not available to them. Much outreach

        14   is needed to include people with speech

        15   disabilities in using speech-to-speech relay

        16   services, much less for broadband.

        17   Here are some ideas and recommendations

        18   to improve the use of broadband and

        19   speech-to-speech by people with speech

        20   disabilities.

        21   One, there must be a national outreach

        22   program explaining extensively all relay services

1 and the advantages that could be had by using

2 video-assisted speech over broadband. Some help

3 in acquiring the needed equipment is essential for

4 many people with speech disabilities; indeed for

5 all people with any kind of disability because

6 they may be unemployed.

7 And two, 911 center call takers should

8 be trained to accept speech-to-speech relay calls.

9 If someone with a speech disability cannot be

10 understood by the 911 operator, the operator

11 should know to ask them to call back through

12 speech-to-speech relay.

13 When or if 911 centers go to the next

14 generation 911 that is Internet-based, it will

15 improve outcomes for people with speech

16 disabilities when they can call using video to

17 better get their emergency needs conveyed to the

18 911 center.

19 To sum up what has been said and looking

20 towards the future, all Americans need the ability

21 to communicate using video-assisted speech over

22 broadband. Thank you for this opportunity to

1   speak to you today. And if Dr. Bob Seagleman is

2   online, he may want to make a comment.

3   MR. HORRIGAN: Thank you very much.

4   Next, Rosaline Crawford.

5   MS. CRAWFORD: Good morning, everyone,

6   and I want to first thank the Commission for

7   hosting this all-day session to really talk in

8   depth about the needs of the community of people

9   with disabilities, and specifically in relation to

10   the development of the National Broadband Plan.

11   So thank you very much.

12   My name is Rosaline Crawford. I am the

13   Director of the Law and Advocacy Center of the

14   National Association of the Deaf. We are a member

15   organization with state association and

16   organizational affiliates.

17   The National Association of the Deaf is

18   also a founding member and member of the Steering

19   Committee of the Coalition of Organizations for

20   Accessible Technology, a coalition of more than

21   250 national, state, and local community-based

22   organizations.

1   I want to talk specifically about the

2   community of people who are deaf and hard of

3   hearing. As a refresher, I think we need to look

4   back a little bit at the history of what we've

5   come through, and to recognize that what most

6   people, you know, take for granted these days is

7   access to telephone and television.

8   And if we just take a look at how long

9   it took for this technology to become accessible

10   to people who are deaf and hard of hearing, we

11   recognize that it wasn't just a matter of the

12   technology being around for years. It was a

13   matter of the technology being around for

14   generations, generations of people who didn't have

15   access.

16   And we are firmly committed that as this

17   technology -- these technologies migrate over to

18   the Internet and as the Internet and broadband

19   become much more commonplace than even they are

20   today, that we will not be forgotten. We will not

21   be left out. And we will not be left behind.

22   We will not have history repeat itself.

1   It's not the right thing to do.

2   We have to look at the fact that

3   telecommunications for telephones that TTYs were

4   developed and started to be deployed in the '60s

5   and the '70s, but that nationwide relay services

6   did not get put in place until the 1990s. We have

7   to look at the fact that captioning for television

8   programs didn't start coming about until the 1980s

9   and that the benchmark of 100 percent captioned

10   television programs, that benchmark, was not

11   reached until 2006.

12   We must do better. With respect to the

13   deaf and hard of hearing community, with respect

14   to e-mail, mobile text devices, text messaging, we

15   were the early and eager adopters, because this

16   communication for us was accessible.

17   As we move over to the Internet, we are

18   faced with very similar challenges across the

19   board. With respect to availability, our

20   availability is also impacted significantly by

21   affordability. Even where broadband is there in a

22   community, a lot of our community cannot simply

 1   afford it, and this all comes back to

 2   unavailability of employment opportunities,

 3   discrimination in the workplace, and so it's all

 4   wrapped up.

 5   Accessibility then also becomes an

 6   issue. We have to build accessibility into the

 7   infrastructure. If we have a combination of

 8   infrastructure, equipment, and technology that all

 9   has to be in place and ready for the content

10   providers.

11   And the content providers must also be

12   mandated to provide accessibility. Much of that

13   is already mandated today. What we really need is

14   enforcement in order to ensure that existing laws

15   in place are actually applied across the board,

16   from the Federal Government to the private

17   business.

18   In the National Broadband Deployment

19   Plan, we also want to ensure that every contract

20   that gets issued, every grant that gets made,

21   includes specifically provisions that require

22   accessibility. This is Federal funding. Section

1   504 applies.

2   There is absolutely no reason that

3   accessibility should be relegated to one or two

4   grants in the big spectrum of this operation. It

5   needs to be included in every single contract.

6   In addition, we do need to have special

7   attention focused on outreach, education, and

8   training, specifically made accessible to and

9   targeted to reach people with disabilities, and

10   particularly deaf and hard of hearing community

11   included.

12   What we also need to be aware of is that

13   the marketplace has never supported or provided or

14   resulted in accessibility. We end up with a whole

15   bunch of assistive, augmentative devices and

16   technology that are incredibly expensive for

17   people with disabilities to obtain or people to

18   research, develop, and produce and manufacture and

19   to distribute.

20   We don't have enough state distribution

21   programs for assistive technology. They're not in

22   every state. I think the number is 35 or 37

1   states that actually have these programs. Every

2   state needs to have one.

3   We also need to look at the legislation,

4   and I want to draw your attention to the 21st

5   Century Communications and Video Accessibility Act

6   that's now Congress, H.R. 3101, and take a look at

7   some of the things that are in there that will

8   assist with ensuring that, as we move to broadband

9   and Internet that we retain accessibility

10   mandates. It has to be mandated. The marketplace

11   will not do it on its own. This is our history.

12   And specifically with respect to

13   affordability, we want to take a look at use of

14   lifeline link up, Universal Service funds. That's

15   in H.R. 3101. I believe it's also been presented

16   before the Commission in an open proceeding that

17   hasn't been put out for public notice yet -- to

18   enable people with disabilities who are eligible

19   for lifeline link up funds to be able to apply,

20   choose to apply those funds to broadband and not

21   just regular telephone service, whatever meets

22   their needs.

1   MR. HORRIGAN: We're going to ask you

2   wrap up in about 30 seconds.

3   MS. CRAWFORD: And the other provision

4   in 3101 is Universal Service Funds for the

5   development of telecommunications assistive

6   technology for people who are deaf, blind, which

7   I'm sure my colleague down the road will elaborate

8   on. Thank you very much for your time.

9   MR. HORRIGAN: Thank you. Eric Bridges?

10   MR. BRIDGES: Good morning. The

11   American Council of the Blind appreciates having

12   the opportunity to participate in this panel and

13   it's good to be back here.

14   The American Council of the Blind is a

15   consumer group representing about 25,000 members

16   across the country. Our members are obviously

17   blind or visually impaired. The visually impaired

18   spectrum is quite naturally the largest of the

19   blind or visually impaired population.

20   One of the challenges that we face often

21   is the lag in technology; that is, technology

22   being either modified or having it come off the

1   shelf through industry that is accessible to us.

2   As my colleague, Rosaline, was just

3   talking about, the history and the rather

4   unfortunate history of the disability community as

5   it pertains to having timely access to the same

6   technologies as the rest of the general public

7   has.

8   A PDA is no longer just a public display

9   of affection. It's something that I would assert

10   probably 80 percent of the room has either in

11   front of them or in their pocket right now.

12   I have one as well, and let me just tell

13   you a brief story about the accessibility level of

14   my PDA. It's -- it is accessible. However, it

15   came with a cost, a cost of about $500 -- the

16   initial cost of the phone itself and then a $250

17   piece of software that I paid for out-of-pocket to

18   load on to the phone to make it accessible.

19   Affordability and cost is a huge factor

20   in the slow adoption of broadband or mobile

21   broadband in this case to my population. The cell

22   phone is no longer just a cell phone. It is an

1   incredible tool to use for information and

2   communication.

3   This may surprise some of you, but the

4   American Council of the Blind applauds Apple for

5   actually producing the very first accessible

6   off-the-shelf PDA in the release of the newest

7   version of the i-Phone. Who would have thought

8   that industry would make an accessible PDA that

9   has no buttons on it? However, this is one

10   choice. This is one device. It doesn't

11   necessarily provide consumer choice. But we do

12   applaud Apple for taking this step.

13   So last night, I saw -- I was watching a

14   -- actually, it was a Food Network show, and they

15   were talking about souvlaki, okay, so I don't now

16   what souvlaki is. So I go and I get on Google,

17   and I figure out what souvlaki is. And I guess

18   what I want to do right now is just talk to you

19   about the process that I went through.

20   I turned on my computer, which, I don't

21   know, cost about $800. My screen reading software

22   booted up, which cost another $800 to a thousand

1   -- actually, it was about a thousand dollars; and

2   hopped on the broadband, which I pay -- I think

3   it's like 40 bucks a month.

4   So this is, you know, the assistive

5   technology aspect of this is incredibly costly, as

6   I referred to in my PDA example.

7   But thankfully, Google does very well in

8   terms of the accessibility level of the website.

9   Unfortunately, some of the sites that it links me

10   to when I do searches are not, and herein lies

11   another challenge that the blindness community

12   faces.

13   And having somewhat limited access to

14   the Internet as it pertains to how companies,

15   whether they be brick and mortar or just online,

16   how they produced their websites. It's a huge

17   challenge. And it's something that unfortunately

18   we're seeing more and more challenges in accessing

19   websites that have forms to fill out, other

20   aspects dealing with PDF and or security measures,

21   such as caption.

22   The other -- from the first panel,

1 Section 508 compliance came up. The American

2 Council of the Blind has been working tirelessly

3 for the last year on 508 matters within the

4 government.

5   One of the challenges that we saw

6 immediately in dealing with the VA is that number

7 one, the 508 Compliance Office is not even funded

8 at a level and not staffed at a level where it can

9 hope to be successful.

10   What we would like to see is an added

11 emphasis on the funding of these compliance

12 offices so that they can actually do their jobs

13 effectively and have a recipe for success. It

14 might interest some of you to know that for each

15 of the previous six fiscal years the VA 508

16 Compliance Office was funded at a rate of less

17 than $1 million a year.

18   These individuals --

19   MR. HORRIGAN: Eric. We're at about the

20 six- minute mark, so if you could wrap up for the

21 next 30, 45 seconds.

22   MR. BRIDGES: Thanks. I'm a blind guy.

1   I just talk and talk, and then I wait for someone

2   to shut me up.

3   MR. HORRIGAN: Thanks a lot, Eric.

4   MR. BRIDGES: So thank you. The

5   absolute frustration exists within a lot of these

6   508 Compliance offices, because they know and they

7   are dedicated to doing their jobs, but they don't

8   have the tools. They don't have the funds. They

9   don't have the staff to be successful at the end

10   of the day. And with the VA, they're currently

11   doing with about 300 different IT projects, and

12   that's an actual quantifiable number.

13   So with that, the blindness community

14   views broadband as a fantastic way to further

15   level the playing field as it pertains to

16   employment, education, and social interaction.

17   But there are a lot of challenges and barriers for

18   us in order to be able to adopt at the same rate

19   as the general public. Thank you.

20   MR. HORRIGAN: Thank you, Eric.

21   Elizabeth Weintraub.

22   MS. WEINTRAUB: Thank you. My name is

 1   Elizabeth Weintraub. I like to be called Liz.

 2   And I'm from Maryland, and I wanted to first say

 3   thank you very much for inviting me today to speak

 4   to you.

 5   I work for -- I work at the Council on

 6   Quality Leadership part-time, and also I consult

 7   for the National Children's Center in D.C.

 8   Both of these organizations are worked

 9   out people with disabilities get good quality

10   life. I have been using a computer since the

11   mid-'90s. And yes, I hit the wrong key by

12   accident. However, if I was told by people I

13   needed to stop using a computer just because of my

14   disability that would not be fair at all.

15   How would I keep up with the world? The

16   Internet is essential to knowing what is going on.

17   If technology wasn't accessible to people with

18   disabilities, then it might be impossible for

19   people to lead a life that they would like.

20   At the Council on Quality Leadership all

21   my colleagues live everywhere in the country. And

22   if I couldn't e-mail or fax or cut, paste in

1   documents or communicate with them, then I would

2   probably get fired.

3   I would not get fired because of

4   discrimination, but because of the technology is

5   inaccessible. The way that my work is set up is

6   such that I could not use technology. I would not

7   be useful.

8   Actually, if I can share a story. The

9   headquarters of the Council on Quality and

10   Leadership is about an hour away from here in

11   Baltimore. And when they moved to this area, I

12   asked my bosses if I could work at home like all

13   my colleagues because they live everywhere or they

14   said.

15   And they weren't real concerned that I

16   would not be able to, because of the support and

17   the tech -- the support I would get because I have

18   to be very independent, and I can't call up every

19   five minutes and say, "Look. I need some help

20   with my computer or whatever."

21   Eventually, I got to a point that I

22   could do things. That's why it's important that

1   everyone, including people with disabilities

2   should be trained in using technology. Not being

3   trained in technology and how to use it is a big

4   barrier for people with disabilities.

5   Also not having technology support from

6   the companies that provide Internet and computers

7   and technology is a problem. We need technology

8   support so we don't get stuck.

9   Another barrier is the cost of Internet

10   access. Not everyone can afford it, and if you

11   live in a rural area, the cost is often more. We

12   don't earn as much as people without disability,

13   so this is a barrier.

14   The FCC should do more outreach to

15   people and not just through electronic means,

16   since not everyone has computers and Internet

17   access.

18   We need more public meetings in like a

19   city and town that are advertised a lot longer

20   ahead of time, like a month in advance. It takes

21   time for us to find out -- it takes time for us to

22   find out about a FCC meeting. We learn about

1   things like this from disability groups at the

2   national, state, and local levels. And it takes

3   time for us to arrange car and bus rides.

4   We also often have to arrange for

5   childcare. Some of us need to arrange for

6   personal assistants if we need them.

7   I would like to see the Internet

8   available just about everywhere in the country so

9   all of us have a chance to find the information

10   and resource materials. There is a lot of

11   information available that helps get a job and do

12   our jobs.

13   Also for when we take care of our

14   family. I would like to see the Internet easy to

15   use, cheaper to us such as in every home.

16   Dial-up might be cheaper than DSL, but

17   it means that you can't be on the phone at the

18   same time, and also when I had dial-up, I would

19   get -- I would be concerned because there were

20   times that it would not connect, and I would be

21   concerned whether it was me or whether it was the

22   computer. Thank you.

     1   MR. HORRIGAN: Thank you, Liz. Now to

     2   Peggy Hathaway.

     3   MS. HATHAWAY: Is this working? Okay.

     4   I'm Peggy Hathaway. I'm Vice President for Public

     5   Policy for United Spinal Association. And since

     6   we've now formed a policy collaborative with the

     7   National Spinal Cord Injury Association, I

     8   represent both organizations.

     9   Eric Larson of National Spinal Cord

    10   Injury Association and Mary Bruner also of NSCIA

    11   really apologize that they couldn't be here today

    12   and frankly they're the experts, so I'm just

    13   trying to communicate what they have helped me

    14   understand.

    15   Both organizations, the National Spinal

    16   Cord Injury Association and the United Spinal

    17   Association, serve Americans living with paralysis

    18   resulting from spinal cord injuries or disorders.

    19   And the causes of the specific impairments vary

    20   widely. But generally, people do have growth and

    21   fine motor skill limitations.

    22   And often when you think of spinal cord

1   injuries, you think of people needing wheelchairs,

2   and often they are people who need wheelchairs.

3   But what people don't automatically think of with

4   spinal cord injuries and disorders is that it

5   certainly can affect fine motor skills as well.

6   I'm going to use an example of a member

7   of our board, Tom Cook, had quite a high spinal

8   cord injury when he was 19 years old, and he

9   cannot use his hands. He absolutely cannot use

10   his hands, and how he communicates and does

11   business and functions quite well is through a

12   voice-activated computer. And so you not just

13   have to worry about mobility impairments, but also

14   the fine motor skill impairments.

15   And these people -- a lot of people

16   cannot, you know, press the button on the phone or

17   do these other simple things or use a keyboard

18   that so many of us take for granted.

19   And I want to talk a little bit about

20   the population of people in the United States with

21   paralysis. There's a recent population study

22   conducted by the University of New Mexico School

 1   of Medicine Health Sciences Center. And it found

 2   that approximately six million people in the U.S.

 3   are living with paralysis.

 4   This is nearly 33 percent more than

 5   previous estimates showed. Household income for

 6   those who reported being paralyzed is heavily

 7   skewed towards the lower income brackets. It's

 8   significantly lower than households for the

 9   country as a whole, as reported by the United

10   States Census.

11   The study shows that paralysis is fairly

12   evenly distributed between males and females, but

13   -- paralysis from any cause -- but paralysis due

14   to spinal cord injury is greater among males and

15   nearly twice as likely to -- and males are nearly

16   twice as likely to incur a spinal cord injury as

17   females.

18   In the University of New Mexico study,

19   just over three-quarters of those who reported

20   being paralyzed were white. It's about 77, but

21   nevertheless, according to the United States

22   Census, disabilities -- people with spinal cord

1   injuries are more disproportionately distributed

2   among minority communities, except for Hispanics.

3   That seems to be about the same as the population

4   of Hispanics in relation to the whole country.

5   Yet, people with spinal cord injuries

6   and disorders are really quite capable of being --

7   participating in communities and doing all kinds

8   of jobs and learning, et cetera. Tom is an

9   example of that.

10   After was injured, he went on and got a

11   -- both a bachelor's degree and a Master's degree.

12   But the American with paralysis who have broadband

13   access use it for work, as well as access to

14   healthcare and for educational purposes.

15   And we'd like to make the following

16   specific recommendations for the FCC's National

17   Broadband Plan.

18   We would like it to include continuation

19   and expansion of programs that encourage broadband

20   investment and network build out in rural areas to

21   provide the means for unserved users to connect.

22   Cost is a huge barrier to broadband

1   access for many people with spinal cord injuries

2   and disorders. Programs subsidizing equipment and

3   connection expenses as well as necessary assistive

4   technology similar to the USF are critical to

5   people with spinal cord injuries and disorders.

6   For example, someone who's living solely

7   on an SSI payment of about $670 --

8   MR. HORRIGAN: Since we're getting tight

9   on time, how about I suggest to you that you just

10   go through any additional recommendations so that

11   we can --

12   MS. HATHAWAY: Yeah.

13   MR. HORRIGAN: -- have enough time for

14   everybody and a few questions?

15   MS. HATHAWAY: Okay. Sorry. I'll be

16   just. I was just to say that somebody who lives

17   on SSI who earns $600 -- who's sole income is $674

18   per month this year can't afford the software,

19   can't afford the voice-activated equipment, et

20   cetera. So cost is a real important issue.

21   And we want programs designed to educate

22   prospective broadband Internet users to be

1   implemented so they can more quickly realize the

2   benefits. They should be designed to incorporate

3   messaging and training about access for people

4   with disabilities, including people who live with

5   spinal cord injuries and disorders.

6   Communications should be encouraged that

7   are targeted directly at the disability community.

8   For example, the FCC may consider reworking its

9   own website so that information about broadband

10   and programs to support broadband are clearly

11   called out for various disabilities so that it

12   will be easier for a consumer to find the

13   information that will most help him or her.

14   The National Broadband Plan should also

15   have incentives to develop or build broadband

16   equipment operable without touch or pressure from

17   touch, such as voice- activated or speech and eye

18   movements or brainwave activities -- are some of

19   the examples.

20   Applied research needs funding. Above

21   all, FCC should advocate a path for continued

22   private investment to these realities can be

     1   achieved. Thank you for having me and paying

     2   attention to these recommendations.

     3   MR. HORRIGAN: Thank you very much. Now

     4   Elizabeth Spiers?

     5   MS. SPIERS: Good morning, everyone. My

     6   name is Elizabeth Spiers. I'm from the American

     7   Association of the Deaf, Blind. The AADB is a

     8   national organization by and for people with both

     9   hearing and vision loss.

    10   Our membership varies in nature of

    11   disability and severity. Some people are hard of

    12   hearing and visually impaired. Some people are

    13   profoundly deaf and completely blind. So we have

    14   a wide landscape of membership within our

    15   organization; and a variety of communication

    16   needs.

    17   There are approximately 1.2 million

    18   individuals in the United States who are

    19   categorized as deaf and blind. That means there's

    20   about -- and of that population, there's about a

    21   60 percent usage of broadband technology -- 60 to

    22   80 percent, I should say, who use the services.

1   The deaf, blind community, as you can imagine, do

2   experience some challenges in trying to access

3   that technology. Obviously, computers are a very

4   popular method of communication, not only for the

5   mainstream population, but for our membership as

6   well.

7   Just as an example for a fully blind and

8   deaf person to connect to the Internet, they would

9   require not only the use of a computer, but also a

10   Braille display that would provide output to read

11   what's on the screen. And that type of equipment

12   can cost as much as $10,000.

13   There's another type of equipment that

14   can be utilized for deaf-blind individuals called

15   a deaf-blind communicator. And that basically

16   functions in the same fashion as a PDA or a TTY.

17   That can cost upwards of $3,000.

18   And if you need to add additional

19   equipment, such as Braille Note, to allow a

20   deaf-blind person to communicate with somebody who

21   does not know sign language, that's another

22   $8,000.

1   So deaf-blind people who especially

2   might live on Social Security income obviously

3   can't afford that type of cost prohibitive

4   equipment, especially when trying to access

5   broadband technology.

6   It could be as much as $600 or $800 a

7   month just to use the basic equipment necessary to

8   get on par with the mainstream population.

9   We also need assistance from state-wide

10   distribution programs. Some have provided

11   equipment on loan, permanently. And some states

12   have no programs available for their consumers.

13   We experience other challenges, such as,

14   like most of us may experience -- breakdown in the

15   technological equipment, and that creates issues

16   for us as well in getting that type of equipment

17   repaired.

18   I'd like to address two specific areas

19   in broadband services at this point. One is text

20   relay. For example, IP relay, like Nextalk,

21   allows you to create online conferencing and other

22   video services of that same variety.

1   For individuals who are fully deaf and

2   blind to use a text relay with equipment, for

3   example, like the Braille display that I mentioned

4   a minute ago, it again brings us back to the issue

5   of affordability.

6   For people who are deaf, they rely

7   exclusively on visual information, and that text

8   stream of information is readily available. For

9   video relay services, a lot of deaf and hard of

10   hearing individuals who experience also low vision

11   also need access to those services.

12   Keep in mind, though, that interpreters

13   also need additional training to work with the

14   consumers who have low vision.

15   For example, you can see my interpreters

16   today are wearing high-contrast clothing so that

17   I'm able to see their hand shapes much more

18   clearly. People with low vision sometimes have

19   trouble seeing signs in a 2-D format or finger

20   spelling.

21   So, it's important to work with the

22   video relay service companies to train their

1   interpreters to work with this consumer

2   population.

3   Video relay services do not currently

4   make available accessible services for completely

5   deaf-blind consumers. There's one company called

6   Communication Facilitators that we refer to as

7   CFs, who can sit within the deaf-blind consumer

8   and function as a relay between the online

9   interpreter and the person at the other end of the

10   line.

11   AADB has been in discussions with the

12   FCC about asking for video relay services to add

13   CFs, communication facilitators, as a requirement

14   for those -- these types of services that are

15   being provided.

16   MR. HORRIGAN: We're going to ask to

17   wind up in about a minute.

18   MS. SPIERS: Sure thing.

19   MR. HORRIGAN: Thank you.

20   MS. SPIERS: I also wanted to mention

21   again that legislation, 3101, the Video

22   Communication and Telecommunications bill, which

1   can provide funding to help deaf-blind individuals

2   who want to purchase the types of equipment I've

3   mentioned, and also provide funding and

4   requirements to broadband services and providers

5   of those services.

6   I would like to see that bill passed

7   successfully, and I encourage people to support

8   that legislation, because we need to make

9   broadband services more accessible for everyone.

10   Thank you so much for your time.

11   MR. HORRIGAN: Thank you. And now Jim

12   Tobias, and I think we'll have a chance for a

13   question or two. Jim?

14   MR. TOBIAS: Thank you. Jim Tobias of

15   Inclusive Technologies.

16   I want to talk a little bit about the

17   double dose of discouragement that people with

18   disabilities have as non-consumers of broadband

19   and advanced technologies of all types. The first

20   category I think we're already familiar with, and

21   some of the speakers on the panel have mentioned

22   them already, and those are the standard

        1   demographic factors that we already know

        2   discourage people from the use of things like

        3   employment, which we know people with disabilities

        4   have almost three times a higher unemployment rate

        5   of those seeking employment. Household income.

        6   People with disabilities are twice as likely to be

        7   in poverty level or below -- a household. Age a

        8   prominent factor in non- adoption of Internet and

        9   broadband. Many disabilities don't emerge until

        10   the person reaches a certain age. And educational

        11   attainment, where, for example, college degrees --

        12   people with disabilities are three times less

        13   likely to have a college degree.

        14   All of those we already know map onto

        15   reduced levels of adoption. But disability, as

        16   we've also heard, imposes its own particular

        17   burdens. The one that I think the panelists have

        18   spoken about most tellingly are the accommodation

        19   expenses -- the high cost of screen readers and

        20   assistive technology, and especially Braille

        21   displays, impose a burden on someone somewhere,

        22   and it might be the consumer or it might be the

     1   consumer's service provision agency, but, at any

     2   rate, the number of devices out there to allow

     3   people to complete that final link we know is much

     4   lower than the demand or the need would be if we

     5   weren't concerned about the price.

     6   The reality of inaccessibility on the

     7   Internet has both a real and a perceived effect.

     8   That is, people actually do have trouble using the

     9   Internet. We know from websites, PDF forms,

    10   uncaptioned video, et cetera, et cetera, that

    11   there are actual barriers out there, in fact,

    12   quantified, 28 percent of non-users of the

    13   Internet say that it is because their disability

    14   makes the Internet difficult or impossible to use.

    15   And even users, 20 percent of users, say

    16   that use of the Internet is difficult for them.

    17   And we know that this has a kind of an effect on

    18   the behavior of these users. We tend to use the

    19   resource less than they might otherwise for fear

    20   of encountering a barrier.

    21   So there is a perception aspect as well.

    22   People with disabilities and I think people on

 1   this panel can speak about it as well have had

 2   long experience of inaccessibility. That tends to

 3   generate a certain technological pessimism on

 4   their part.

 5   And so without any other contravening

 6   factor in favor of using broadband technologies,

 7   they might shy away from it. And I think part of

 8   this is a digital divide issue within the

 9   disability communities themselves. That is, that,

10   you know, the folks here on this panel and, you

11   know, the other well-connected and sophisticated

12   and advanced users and advocates are at one end of

13   the utilization. It might even be higher than

14   average utilization. Whereas, the people at the

15   other end, with all of those negative demographic

16   characteristics -- weaker social networks, less

17   access to information about the benefits of

18   broadband -- are stretching further and further

19   behind.

20   What I'd like to see the Commission

21   focus on certainly reflects the questions that

22   Elise Kohn asked the previous panel about data

 1   collection. What do we know? What don't we know?

 2   Why don't we know it? And how can we learn it?

 3   What do people with disabilities

 4   actually do? What are their actual patterns of

 5   usage and adoption and non-adoption? And not just

 6   at the, you know, do you have broadband/don't you

 7   have broadband, but what are you actually using?

 8   What are you doing on the Internet?

 9   All consumer research I think would

10   benefit from a kind of market basket approach.

11   You know, if you look at the Bureau of Labor

12   Statistics market basket, what they count for

13   purposes of measuring inflation has changed over

14   time. You know, 40, 50 years ago, they included a

15   bag of flour. They don't include a bag of flour

16   anymore because people don't buy bags of flour as

17   much.

18   So I think we're in the same situation

19   with broadband. What are people actually doing

20   with their connections? How are those patterns

21   changing over time as technology migrates? And

22   are those changes, those current situations and

1   emerging technological trends, are those in

2   jeopardy -- are those jeopardizing the dissipation

3   of people with disabilities?

4   I have a lot more to say about consumer

5   research, and I was very encouraged by Richard

6   Horne's comments about inclusion of disability in

7   mainstream consumer research; very encouraged by

8   Marty Exline's offer of data that's very close to

9   us. We have a good bead on a lot of the sources

10   of information -- the Tech Act projects.

11   Certainly FCC's own TRS Program could

12   offer us a wealth of information about those

13   users, and, you know, what they do and what they

14   don't do over the 15 years and more that we have

15   knowing about the utilization of that program.

16   And as it's changed from text towards video, as

17   it's moved from pots to Internet-based, what are

18   the effects? What are people doing? How are they

19   achieving their access? How are they falling off

20   if they're falling off? And what kind of

21   programs? Can we use a data-driven and

22   outcomes-oriented approach to drive our policy

1   decisions so that again Elise Kohn's question

2   about effectiveness.

3   You know, if we're going to intervene,

4   we've got 100 ways to intervene. How do we know

5   which is going to get us the most effective and

6   efficient results?

7   So I hope we have a chance to influence

8   the Commission in the creation of the National

9   Broadband Plan to focus on real-life data

10   collection, real-life consumers with disabilities

11   as a way of making sure that they're included in

12   the plan and in the follow through.

13   MR. HORRIGAN: Thanks very much, Jim,

14   and as you close with the notion of data-driven

15   collection, we are, as we conduct our Consumer

16   Research Survey as part of the National Broadband

17   Plan focusing on what role disabilities may play

18   in berries to broadband adoption. And we'll also

19   be asking about usage patterns as well.

20   What we've done here is gone a little

21   bit too long to have room for questions. That's

22   too bad in one respect, but I think it was

1   important to give this panel at chance to let us

2   know the range of different issues that are in

3   play for the disabilities population.

4   So we will not have time for questions,

5   unfortunately. We will move on to the next panel

6   so we can keep on schedule for the day. So thanks

7   very much to the panelists, and we'll continue to

8   talk with you as we develop the National Broadband

9   Plan. Thank you.

10   (Recess)

11   MS. KANE: Ladies and gentlemen, if you

12   could take your seats, we're going to go ahead and

13   get started. Thank you very much to all of the

14   participants in the audience this morning, and

15   particularly to our esteemed panelists. We're

16   very, very grateful for your time and look forward

17   to this discussion. My name is Kristin Kane and I

18   am heading up the work on the broadband taskforce

19   related to national purposes, which is to say how

20   can we advise the federal government to use

21   broadband infrastructure and applications to

22   further the country's work and priorities in a

1   number of key areas, which include education and

2   healthcare and energy, public safety, economic

3   opportunity, which includes job creation, job

4   training and also government performance in civic

5   engagement. So we're very delighted to hear from

6   all of our panelists this morning and going into

7   the afternoon about the ways in which broadband

8   work in these areas can serve people with

9   disabilities. So thank you again for being here.

10   Let me go through the protocol just briefly. Each

11   panelist will present for between three and five

12   minutes. We'll go through the presentations

13   serially. There's a timekeeper on the top box

14   there. It will flash at three minutes, but you'll

15   have five minutes to give your presentations.

16   We're going to hold questions until after each of

17   the panelists has presented and those of you

18   joining us in the audience please feel free to

19   submit written questions and we will address as

20   many of them as we can during the session this

21   afternoon and those we can't get to, we will

22   certainly include in the public record. I also

1   want to thank folks from the National Purposes

2   Team on the broadband taskforce who are with us

3   today to help me ask questions of the panelists.

4   So with that, thank you very much and we'll go

5   ahead and start with Jim Fruchterman, the

6   President of Benetech Education.

7   MR. FRUCHTERMAN: Okay. Thank you very

8   much. So Benetech is Silicon Valley's

9   deliberately nonprofit high- tech company as

10   opposed to all the accidentally nonprofit

11   high-tech companies I used to work for. We are a

12   software developer for specific social purposes.

13   We've been in the disability field for 20 years.

14   We created the Arkenstone reading machines in the

15   '90s. I sat on the Section 255 and 508 committees

16   during the '90s. And today I'm going to be

17   talking about Bookshare. Bookshare is our

18   national digital library for people with print

19   disabilities and our shorthand description for

20   Bookshare is Amazon.com meets Napster meets

21   talking books for the blind, but legal. And I'm

22   going to touch on each one of those very quickly.

     1   So Amazon.com -- more than 60,000 digital books

     2   on-line. You just search like Amazon. Napster --

     3   it's mainly peer produced. Our volunteers --

     4   mainly people with disabilities -- when they scan

     5   a book, choose to proofread it and share it with

     6   the rest of the community through Bookshare.

     7   Talking books for the blind -- obviously people

     8   with print disabilities are more than just blind

     9   and visually impaired. It also includes people

    10   with severe dyslexia and people who have a print

    11   -- physical disability that means they can't hold

    12   a book or turn a page and they have some kind of

    13   difficulty. All of our users fall under the

    14   copyright exemption -- Section 121 -- that allows

    15   us to grab just about any book, scan it and put it

    16   into text. That last point is also important.

    17   We're text based. We're not human narration.

    18   We're not an expert Braillist. We're actually

    19   scanning the entire book to make an e-book that

    20   then you can turn into synthetic speech -- that's

    21   the most common use -- where the voice is spoken

    22   aloud, enlarge it for someone with low vision,

1   turn it into Braille -- both digital Braille and

2   hardcopy Braille -- and people with dyslexia

3   especially enjoy software that will spotlight the

4   word and say it aloud at the same time. This

5   bimodal approach turns out to be really important

6   for people with learning disabilities. It's an

7   on-line service. There's no tangible thing that

8   you get from Bookshare. You download the books.

9   You download the software from us and it operates.

10   It's -- you know, I think the key thing about what

11   the internet makes possible is a power shift

12   around who's in control of the library. For

13   example, the shift that we had -- because this is

14   the first library for people with disabilities

15   built primarily by people with disabilities. If

16   you thought a book was important enough to invest

17   three hours to scan it, and another volunteer

18   spent a couple hours proofreading it. We think

19   it's important enough that the entire community

20   gets access to it, which means, of course, that we

21   have a very eclectic mix of books as well as all

22   the best sellers, all the -- you know -- Newberry

1   Award winners, text books and the like. We also

2   have great -- well, I won't get into the

3   collections. You can imagine the kind of

4   collections people would pick if they were

5   interested -- you know, whether it's religious or

6   erotica or specialty issues. We've got it all. I

7   think the -- the other issue that is quite

8   important is that two years ago after --

9   Bookshare's printing is primarily funded by its

10   users and by philanthropists -- the Department of

11   Ed put out an RFP to deliver this kind of service

12   nationwide. And two years ago, they awarded us a

13   $32 million, five year, cooperative agreement to

14   provide Bookshare for free to every single student

15   in the United States who has a print disability.

16   So we've gone from serving 2,000 students to over

17   60,000 students in two years. We promised to

18   serve 100,000 students over the five years. We'll

19   easily serve 200,000, 250,000 students. And the

20   power, of course, of the internet is it's not

21   going to really cost us any more money to serve

22   more than double as many students because of that

1   -- of that sort of power of once you build it,

2   then you can share it many times over without a

3   lot of incremental cost. So, as we look forward,

4   we see a lot of exciting opportunities around

5   broadband to influence the audience that we want

6   to serve. First of all, we see richer and richer

7   content. Right now it's just text, but in the

8   last six months we've added high-quality images in

9   all of the text books that we have and so, that's

10   -- that's basically a bandwidth hog and we have to

11   offer people low-resolution images as well as

12   high-resolution images so they -- so if they're on

13   dial-up they -- well, they can't really use images

14   on dial-up. I think the other thing is that we

15   can deliver more and more assistive technology

16   over the web. We and Mozilla Foundation, which is

17   the people who make the Firefox web browser, are

18   putting out a new plug-in for Firefox that reads

19   our books. This is free and open source and so

20   anyone can get their hands on it. The Department

21   of Ed just funded us to do 80 open content

22   textbooks, which are these textbooks that are

1   available under creative comments licenses. That

2   means that anyone can look at these books, not

3   just people who have a qualifying disability. So

4   it's great for assistive technology vendors, but

5   also teachers, people who want to do training,

6   parents want to just check out what this is really

7   like. We think more and better peer production is

8   going to be a big deal. When you put the power of

9   creating content in the hands of the community and

10   the community keeps swelling, the amount of

11   content you get your hands on just keeps growing.

12   We've gone from producing a couple hundred books a

13   month to now between 1,500 and 2,000 books per

14   month because we've got this incredible audience

15   that is hungry for content. We're going to

16   improve this plug-in so that people can do image

17   descriptions, because image descriptions are the

18   most labor intensive thing you can do for a text

19   book. So, it's this idea that we can pull all

20   these sorts of things together and make them

21   available. Our last couple of ideas -- right now

22   Bookshare is free through all the schools. Why

 1   isn't it free through all the libraries? I mean,

 2   you know -- this is the same kind of issue and

 3   because the costs are so low, you know, it

 4   actually doesn't cost a lot of extra money to kind

 5   of deploy this. Again it's that sort of once it's

 6   built, it's very cheap to deploy because it's all

 7   on-line. We want to see that people with

 8   smartphones have access to the same kind of

 9   content and we think it'll really democratize

10   assistive technology. AT tends to be the province

11   of upper class or upper middle class people. But

12   if you can work on a cheap cell phone or an MP3

13   player, you can actually get much broader access.

14   So that's our goal. Mobilize the community. Get

15   people the content they need. Put the power in

16   their hands to help be part of the solution to the

17   accessibility problem and we think broadband is an

18   exciting way of doing that and reaching not just

19   the top 10 percent of people with disabilities

20   that could use our service, but the majority of

21   people. Thanks.

22   MS. KANE: Great. Thank you so much,

1   Jim. That was extremely helpful. Next, I'd like

2   to introduce Magaret Hathaway. She's the Vice

3   President for Public Policy with Spinal Cord

4   Advocates.

5   MS. HATHAWAY: Yes, I'm -- Spinal Cord

6   Advocates is actually a collaboration between

7   United Spinal Association and the National Spinal

8   Cord Injury Association and both Eric Larson and

9   Mary Brooner of NSCIA regret that they couldn't be

10   here today. They're our real experts. So I'm

11   filling in for them. We were asked to address

12   particularly employment and employment is really a

13   huge priority for people with spinal cord injuries

14   and disorders because of the important impact it

15   has on anyone's emotional, mental and physical

16   health. But it also is important for the

17   community and the economy. People with spinal

18   cord injuries and disorders are quite capable of

19   contributing meaning -- meaningfully. Often

20   people who get these injuries are adults when they

21   have them, so they have a lot of education already

22   and what is needed is employment accommodations to

1   enable people to work, notwithstanding their

2   paralysis. And this is where broadband, with

3   appropriate software and assistive technology,

4   just provides huge opportunities for returning to

5   the workforce after a spinal cord injury or a

6   disorder -- a disorder causes paralysis. You can

7   get on-line education and skills training perhaps

8   using some of your resources and if you've got the

9   right equipment and access to broadband. I want

10   to talk about some unemployment rates that are

11   dramatically higher among spinal cord injury and

12   disorder constituents than in the population as --

13   of a whole quoting a 2007 disability status report

14   published by Cornell University. In 2007, the

15   employment rate of working age people with

16   disabilities in the United States was 36.9 percent

17   and the employment rate of working people without

18   disabilities in the U.S. was 79.7 percent. The

19   gap between the employment rates of working age

20   people and without disabilities was 42.8

21   percentage points. That's huge. And employment

22   of non-institutionalized working age people --

1   ages 21 to 64 -- with physical disabilities was

2   31.3 percent. And according to the University of

3   Alabama Spinal Cord Injury Information Network,

4   about 40 percent of people with paraplegia and 30

5   percent of people with quadriplegia -- or I guess

6   the more technical term is tetraplegia --

7   eventually return to work. And access to

8   broadband has made telecommuting attractive to

9   both employers and employees. So that helps if

10   you have mobility impairments. In an April, 2009

11   study, sponsored by Beaumont Enterprise, the

12   author found that increased broadband internet

13   access could lead to the creation of 273,000 new

14   telecommuting jobs, which is huge. Even beyond

15   the benefits to employers, employees and the

16   economy, telecommuting will provide our members

17   and people like them with the ability to support

18   their families and to contribute to the greater of

19   good of society. It is our belief that universal

20   broadband internet access combined with the new

21   assistive technology that's very, very important

22   -- affordable we hope -- will provide everyone

1   with a spinal cord injury or disease an

2   opportunity to work and earn a living. And I

3   would like to just give you more of an example

4   than I gave at the last panel about Tom Cook,

5   who's one of the board members of United Spinal

6   Association. As I said, he was 19 when he was

7   injured -- very high spinal cord injury. He can

8   nod his head, but he otherwise can't control his

9   hands or his body in any way. And so speech

10   recognition is very -- and voice activated

11   internet -- is very important to him. It's made

12   all the difference in the world to him. And he

13   can use his head action -- his nodding -- to

14   control the mouse. And by contrast, when he was

15   in college, after his injury, he used a mouse

16   stick to click on every single letter on the

17   keyboard and that was much slower. So the voice

18   activation obviously, you know, makes him far more

19   productive. And so he uses the computer for

20   emails, phone calls, newspapers, watching speeches

21   and these enable him to work and participate in

22   the community. He actually ran for New York City

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 1    Council.  He lost, but he ran.  And then he ran
 2    somebody else's campaign for -- as a paid campaign
 3    manager for the New York City Council.  He
 4    couldn't have done that without all this equipment
 5    and his broadband access.  And he's also had other
 6    paid employment tutoring high school students for
 7    standardized tests.  He was injured when he was in
 8    the military, so his disability is -- is service
 9    connected.  So he's entitled to VA benefits and
10    that makes a very big difference to him because
11    then he can afford a new computer every couple of
12    years.  If he wants to spend $100 on, you know, a
13    new piece of software that will make him more
14    efficient, he can do that.  But that's not true of
15    a lot of people with disabilities and so subsidies
16    or some sort of financial assistance to help
17    people get the equipment they need are really
18    important.  So what if you've got broadband?  If
19    you don't have the skills to press the right
20    buttons or whatever it is you need to do, the
21    broadband doesn't help you at all.  So, he -- Tom
22    wanted to say he's confident that in most jobs, he
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 1   can be productive with his level of disability

 2   simply because of access to broadband and with the

 3   appropriate computers and equipment. And he hopes

 4   that broadband will be available throughout the

 5   country and that adaptive computer software and

 6   other technology will be available to everyone who

 7   needs it regardless of their ability to pay for

 8   it. This will make a huge difference in

 9   employment for people with disabilities and also

10   civic engagement. I mean talk about civic

11   engagement. If you can run for public office,

12   that's civic engagement. And you can also, you

13   know, participate in public hearings like this if

14   you have broadband access. So, anyway, that's our

15   presentation. Thank you.

16   MS. KANE: Thank you very, very much for

17   those comments. Extremely helpful. Next, I'd

18   like to introduce Claude Stout. He is the

19   Executive Director, Telecommunications for the

20   Deaf and Hard of Hearing and will be talking to us

21   this afternoon about public safety.

22   MR. STOUT: Thank you very much. I am

          1   taking Sheri Farinha's place. She functions as

          2   the chair of the TDI E-9-1-1 Workgroup. And this

          3   group has been tasked with the kinds of issues

          4   that we're talking about today -- the IP

          5   environment that we're in today -- and they've

          6   been doing that work for about -- upwards of three

          7   -- two or three years now. And Gallaudet

          8   University -- about five or ten years ago -- tells

          9   a story of there was a deaf guy who smelled a bad

         10   odor. He thought that maybe there was a gas leak

         11   in the house and immediately he dialed the phone

         12   9-1-1 and left the receiver off the hook and left

         13   the building -- left the home -- hoping that an

         14   emergency call would come. And sure enough, 15

         15   minutes later police, fire, the paramedics, all

         16   the first responders descended upon the property

         17   and they were able to call the gas company, fix

         18   the leak, etc. So there's one situation. But in

         19   the intervening two or three years, what's been

         20   going on is I, as a deaf person, if I smelled a

         21   leak, if I dialed 9-1-1, if I had a landline, mind

         22   you. Today, often, certainly deaf people don't

1   bother to have a landline at home. So there isn't

2   even a mechanism for me to do that simple act and

3   leave the property safely and get out of the

4   house. I would have had to what? Bring a laptop.

5   Hopefully that laptop will be enabled for WIFI and

6   somebody could try to type out on the IP relay or

7   if we had a webcam maybe we could do it through

8   video relay -- well, we'll take the latter as an

9   example. If we enabled the webcam and said please

10   dial 9-1-1, hopefully I would have a connection.

11   Hopefully -- the VRS wait time, as you know, is up

12   to two minutes. But we don't have two minutes if

13   my house is going to blow up. So, I could use IP

14   relay and hope that I get a connection and hope

15   that that connection doesn't drop. You remember

16   in the first example with the TTY? That was a

17   sure fire landline. If you make a call, you're

18   on. You're on dial tone immediately. On an IP-

19   based technology, you have to hope and pray that

20   it doesn't drop and that could be text-based or

21   video. And you just hope that it goes through.

22   Nowadays, we are extremely grateful to the

1   Commission for working with us and getting E-9-1-1

2   services and relay services. And this is what we

3   call indirect access. Down the road, we certainly

4   hope to enjoy direct access -- direct access to

5   9-1-1 call centers without the use of the relay,

6   pager and e-mail, other real- time text through

7   the computer and deaf and hard of hearing citizens

8   should be afforded the opportunity to place those

9   emergency services calls. It's important to bear

10   in mind that going forward the National Broadband

11   Plan should include deaf and hard of hearing,

12   deaf/blind, late deafened folks and give them the

13   choice of a range of ways to place those calls --

14   not necessarily through those direct devices --

15   and please remember too when you're talking about

16   this, don't try to apply a one-size-fits-all

17   solution to all of these constituencies that I

18   mentioned. Some deaf people use sign language.

19   Some don't. Some deaf people have good use of

20   their voices. Some don't. Some hard of hearing

21   people can use their residual hearing and use an

22   amplified phone handset. Some can't. Some don't

1   sign. So some have intelligible voices and some

2   don't. We have to recognize that

3   telephone-hearing aid compatibility is something

4   we need to pay due respect to. Also deaf-blind

5   callers -- we need to give due respect to their

6   needs as well. I think it's important to bear in

7   mind in the future in call centers -- in 9-1-1

8   call centers -- if a call is disconnected, make

9   sure that there is a call back mechanism. Also,

10   thanks to the Commission, we have IP- based relay

11   options and the FCC has made darn good and sure

12   that those emergency call centers are compatible

13   with ten digit numbering and geographic locations

14   so that they know who we are and where they can

15   find us. Be advised that the FCC works closely

16   with the Department of Transportation and the

17   Department of Transportation has a next generation

18   9-1-

19   Project underway. The Department of

20   Transportation is doing great work knowing full

21   well that this population needs access to

22   telephone, video, text, data and voice

           1   capabilities. And that -- those range of choices

           2   need to stay on offer so that folks can use it in

           3   the way that best suits them. The recommendations

           4   that I would offer as you develop a National

           5   Broadband Plan is to keep in mind funding,

           6   governance and policy issues, coordination,

           7   development of standards. There's large

           8   overarching issues that you have to frankly figure

           9   out and get the national mandate through so that

          10   all of those 7,000 9-1-1 call centers can adjust

          11   their operations, their physical facilities to

          12   mesh with this kind of technology. As it stands

          13   now, deaf and hard of hearing callers out in the

          14   community are falling further and further behind.

          15   We're talking lives at stake. We're talking

          16   property at stake. So I thank you for your time.

          17   MS. KANE: Thank you. Thank you very,

          18   very much. Next, I'd like to introduce Katherine

          19   Seelman. She's a Professor of Rehabilitation

          20   Science and Technology at the University of

          21   Pittsburgh. She'll talk with us this afternoon

          22   about telerehabilitation.

           1   MS. SEELMAN: Well, thank you very much

           2   for inviting the NIDRR's Rehabilitation

           3   Engineering Research Center on Telerehabilitation

           4   to present on the importance of broadband to TR --

           5   telerehabilitation. If it is affordable and

           6   accessible, it can enable people with disabilities

           7   across the lifespan to better manage their health

           8   and employment activities. Today I'll focus on

           9   health. Telerehab refers to the use of

          10   information and communication technology to

          11   provide rehab services to people over a distance.

          12   Telerehab includes health, but also vocational

          13   rehabilitation and social participation in the

          14   health and vocational domains. Telerehab services

          15   may include teletherapy, telemonitoring,

          16   teleconsultation, telehealth information so

          17   important to prevention and primary care, home

          18   care, personal health records and social

          19   networking for peer-to-peer groups and assistive

          20   technology. Health information technology -- HIT

          21   -- is closely associated with telerehab because

          22   HIT provides the framework for comprehensive

 1   management of health information and its secure

 2   exchange between consumers, providers, government

 3   and insurers. Broadband provides interactivity

 4   opportunities which are used across our

 5   engineering research center and is -- can be

 6   delivered to communities where people live and

 7   work and especially for those who need long-term

 8   health supports and that's mainly people with

 9   disabilities and older people. Today I want to

10   introduce you to a hypothetical 50-year-old

11   American woman whom we call Veronica. Veronica is

12   one of perhaps 140 million people around the globe

13   -- many from third world countries -- with

14   lymphedema. Lymphedema is a chronic condition

15   which Veronica will have her entire life.

16   Treatment for lymphedema varies, but people must

17   daily follow a daily regime which combines direct

18   massage, bandaging and use of a pump to encourage

19   lymphatic flow. Veronica needs long-term services

20   and supports. Veronica has limited mobility

21   because lymphedema causes chronic swelling of her

22   lower limbs. She had difficulty walking and is at

1   high risk for infection caused by skin breakdown

2   and skin ulcers. She has limited health insurance

3   which induces stress and further lowers her

4   quality of life. Dressing, bandaging, financial

5   limitations and limited transportation options

6   makes it difficult for her to go the clinic where

7   she often waits for a half a day for treatment.

8   Veronica has been introduced to

9   telerehabilitations through our RERC.

10   Inexpensive, yet high-quality desktop video

11   conferencing equipment has been installed in her

12   home. It has been connected to a teleportal

13   developed by the RERC. The teleportal is

14   scalable, cost effective, using open source

15   software and provides innovative methods for using

16   social networks to engage consumers while

17   protecting confidentiality as the electronic

18   health record and we hope in the future to be able

19   to demonstrate the teleportal for you. Using this

20   equipment, Veronica has downloaded the training

21   video which provides her with introductory

22   instruction on how to manage her treatment and

1   execute appropriate therapeutic exercise. Using

2   interactive video conferencing, she will be

3   trained to be used certain hand movements to do

4   direct lymphatic massage and other treatment. She

5   will be remotely monitored and outcome of the

6   training and interventions will be evaluated.

7   High-speed video broadband captures clearer images

8   of the hands at various stages and locations

9   during the massage. With a single image, we can

10   only see limited hand movement, but fast speed

11   allows true technique to be revealed. In the

12   past, without broadband, only hospital-to-hospital

13   communication exchange was possible. With

14   smartphone, using wireless broadband, Veronica can

15   execute prevention strategies by sending

16   information including images of skin wounds to her

17   provider. Again, the high-speed broadband

18   connection provides a clear image for the doctor

19   who can then communicate with the local provider

20   and with Veronica. Veronica monitors her own

21   condition using Facebook with our teleportal as a

22   bridge, accessing her personal health records.

 1   She can join a lymphedema social group to increase

 2   peer-to-peer information and socializing.

 3   Finally, the promise of telerehabilitation over a

 4   broadband connection extends to third-world

 5   countries with epidemic levels of lymphedema, but

 6   with few experts. Telerehabilitation can provide

 7   teleconsulations between scarce experts and needy

 8   clients and clinicians. Again, thank you very

 9   much for the opportunity to be here.

10   MS. KANE: Thank you for being here. It

11   was very, very helpful. Finally, it is a pleasure

12   to introduce our final panelist this afternoon.

13   His name is Ishak Kang. He's the CEO and founder

14   of dot UI and will talk to us today about the

15   smart grid.

16   MR. KANG: Hello. My name is Ishak Kang

17   and I'm the founder of dot UI and what we do is

18   make universally accessible, automatic, affordable

19   and easy to use user- interfaces to home

20   technology. Right now we're focused on energy

21   efficiency because that's really where the payback

22   return on investment is to invest in this

 1   technology. But we also envision a future in the

 2   near future where we can deliver solutions to the

 3   home for telehealth, telemedicine and other media

 4   services. All of our products are fully compliant

 5   with an ISO standard for user interface. It's

 6   ISO/IEC 24752. This is an open standard and the

 7   first user interface framework that has ever been

 8   standardized internationally. We also call it

 9   OpenURC for marketing purposes. So you can

10   remember it that way. It -- we want to make -- we

11   want to ensure that the benefits of the smart grid

12   are available to all people and right now there's

13   something going on that I'd like to talk about and

14   just really say why -- why do we need a smart grid

15   and what are we doing here at the FCC? So let me

16   kind of explain that the NERC has projected that

17   North America is going to run out of power. Our

18   national grid is going to run out of power as

19   early as 2015. So, the solution was that we would

20   use the RF funds to create a utility venture

21   capital backed partnership with startup companies

22   to create this new smart grid which needed to be a

     1   two-way network much like what the internet is

     2   like today. And most of the funds that have been

     3   applied for have requested that we build our own

     4   infrastructure for the utilities -- our own

     5   wireless black back-haul that didn't have to

     6   utilize the infrastructure that the

     7   telecommunications industries built. We feel that

     8   that was a mistake and with the scarcity of

     9   spectrum, we should find ways to give benefits to

    10   all people in their homes. They're calling this a

    11   home area network and they want to establish

    12   standards and this standard that -- that was

    13   published in 2008 actually is a common language

    14   for all of these standards to use the existing

    15   technology that's available in homes today and to

    16   use alternative user interfaces and assistive

    17   technologies that people already own. We want to

    18   take advantage of that -- of that installed base

    19   and allow them to get the messages to and fro.

    20   The two-way system that has been proposed and is

    21   what the utilities are trying to establish is

    22   pricing based. What they're really kind of doing

1   right now is offsetting the volatility of the

2   energy market onto the consumer. So the consumer

3   now needs to be aware of pricing during the day as

4   much as a company would. But most people don't

5   have the time or the energy to follow these kind

6   of things. So -- so solutions come out as

7   products, visual displays kind of telling you when

8   energy is high and when it's low, creating the

9   need for you - is that three minutes?

10   MS. KANE: Three.

11   MR. KANG: --creating the need for you

12   to respond to an energy pricing signal so that the

13   real situation is if you don't respond, you'll end

14   up paying more. And I think that that is an

15   unfair situation and that the -- all these pricing

16   -- just like noles and all of these types of

17   incentives need to be accessible to all. The

18   other kind of overwhelming factor that is going to

19   create this need for a two-way smart grid is the

20   adoption -- the mass adoption of electric

21   vehicles. So we talked before about not being

22   able to meet the demands in North America just

 1   with computers and other devices that we're

 2   plugging into the grid. When electric vehicles

 3   become adopted, that really changes the situation.

 4   So this is going to happen. The question is do

 5   they get dedicated spectrum in order to do this?

 6   Do consumers get access to the data so that they

 7   can actually use less electricity? Target devices

 8   and appliances that are consuming more

 9   electricity? This is the -- this is the real

10   challenge that we have to solve. Dot UI has

11   chosen a universally accessible standard as a

12   common language to work with all of these products

13   to benefit everybody and I think that some

14   attention needs to be paid at ISO/IEC 24752 as a

15   solution to recommend. Thank you.

16   MS. KANE: Wonderful. Thank you very

17   much for your remarks, Ishak, and to all of our

18   panelists. Very, very insightful comments. We

19   look forward to the Q&A period. I want to remind

20   the participants in the audience that if you have

21   any questions, please feel free to jot them down.

22   We'll collect them and certainly ask them and put

1   them in the public record. And let me just

2   briefly introduce you to the National Purposes

3   Team up here on the (inaudible) with me who will

4   be starting to ask some questions. First, Carrie

5   McDermott at the end here is working on our

6   healthcare team. Jing Vivatrat is leading our

7   work in workforce development, job training and

8   placement. Steve Midgley is leading our work in

9   education. Jennifer Manner and Ronnie Cho, to my

10   right, are heading up our work in public safety.

11   So thank you to all of you for joining and I'll

12   kick it off with one brief question I have. Oh,

13   and I'm sorry -- and Elizabeth Lyle, of course,

14   who's orchestrated this entire event. Forgive me.

15   I have a question which is for you, Ishak. Can

16   you just repeat, please, the ISO standard?

17   MR. KANG: Yes. It's ISO/IEC 24752.

18   You can remember it's always on 24-7-52. Also

19   called OpenURC.

20   MS. KANE: Great. Thank you very, very

21   much. Anyone want to jump in? Jennifer.

22   MS. MANNER: Thank you very much and

1   thank you everyone. This was very interesting.

2   My question is for Mr. Stout. Your presentation

3   -- first off, I should say the Commission is very

4   much active involved in next generation 9-1-1. It

5   appreciates your comments and recommendations.

6   But the one thing that struck me in your

7   presentation was what happens when an emergency

8   responder responds. Let's assume everything works

9   well and an emergency responder responds to a

10   9-1-1 emergency call. What happens then when the

11   emergency responder comes and let's say they're

12   not able to communicate effectively with the

13   person there and then is there something that

14   broadband could do to help with that?

15   MR. STOUT: Well, like I said, we really

16   can't use a one-size-fits-all. It's sort of

17   decided on a case-by-case basis. If you look at

18   me, I use sign language. If the 9-1-1 call center

19   where I live was prepared ahead of time that in

20   the event of an emergency, they could dispatch an

21   interpreter with that first responder, that's one

22   thing. If I'm using video relay and I'm already

1   connected to an interpreter on the screen, that

2   interpreter can talk to the 9-1-1 call center

3   responder and relay that conversation to me. But

4   one point is that for emergency calls, if you're

5   in a video relay situation, you need to stop and

6   when the first responders arrive with their

7   on-site interpreter, that person would then come

8   into play and not my video interpreter. It really

9   depends on a case-by-case basis. A hard of

10   hearing person might have really nice ability to

11   use their voice, but maybe not the equal amount of

12   ability to hear someone else's voice. I don't

13   even know -- does that answer your question?

14   MS. MANNER: I think so. Thank you.

15   MR. MIDGLEY: Thanks. This is question

16   is for Mr. Fruchterman. Relating to some of the

17   richer media experience that you described as to

18   sort of where things are headed and things that

19   rely more on broadband based services, you had

20   mentioned pictures and the pure production efforts

21   to describe those inaccessible ways. I wonder if

22   you also have any reflections on where things will

1   go with video of various kinds as well as

2   potentially interactive applications and then in

3   addition to those two, the sort of timeliness

4   issues associated with potentially solely print

5   media like news and other current events that

6   people would probably have a lot of interest in

7   relative to your work.

8   MR. FRUCHTERMAN: Okay. Great. So

9   there's a spectrum of materials and it ranges from

10   let's say pure text -- a novel -- to a textbook

11   where a modern textbook in K through 12 has a lot

12   of imaged-based material that's not duplicated in

13   the text. And so we have a whole new set of

14   curriculum that's using anything from let's say

15   the equivalent of a slideshow sort of, you know, a

16   sequence of images, multimedia, all the way

17   through video. And, you know, we partner with

18   different groups at different stages in that. So,

19   for example, we do a lot of work with NCAM at

20   WGBH, the National Center for Accessible Media and

21   there are people who, you know, pioneered

22   captioning and also do video description work so

         1   that, for example, a visually impaired person

         2   knows what's going on and there's a big focus -- I

         3   think a renewed focus at the Department of Ed to

         4   look at some of these description issues when you

         5   get to video. So, it's sort of an adjacent field

         6   to sort of our area of interest. As far as

         7   current materials, there's sort of two tracks.

         8   One is we have a partnership with the National

         9   Federation of the Blind Newsline Project where

        10   everyday 60 daily news -- oh, no, I think it's

        11   more like 150 daily newspapers are uploaded to our

        12   site and are available for download. So, you

        13   know, the New York Times and the Washington Post

        14   is available to our members at six a.m., the same

        15   time you'd get your newspaper. And then, again,

        16   you download it and then you turn it in to

        17   whatever assistive technology form that you use to

        18   access text. The other mode is more just web

        19   access. And I think that, you know, we're part --

        20   we're the founding members of the Raising the

        21   Floor initiative and part of our dream is

        22   delivering more and more assistive technology free

1   through the internet that get you that basic

2   access. So you could go to CNN.com or you could

3   go to your local TV station and get access to a

4   lot of your local news on the web like other

5   people do as well as getting access to the

6   equivalent of the print newspaper.

7   MS. VIVATRAT: Hello. I have a question

8   for all of the panelists regarding the process

9   that people with disabilities go through to look

10   for jobs and to obtain job training. Two part --

11   one is do you know of any pilots of on-line job

12   training that are specifically designed for people

13   with disabilities? And second, what is your

14   thought on how -- what is the best way that we

15   approach people with disabilities, reaching out to

16   them and helping them seek for jobs and train for

17   jobs? Do they use the vocational rehabilitation

18   centers around the country? What are some of the

19   challenges that they're facing when they go to the

20   centers? Thank you.

21   MS. HATHAWAY: Well, I was assigned

22   employment, so I'd guess I'd better respond. This

1   is Peggy Hathaway. And this actually not my area

2   of expertise, but I don't think you can lump all

3   people with disabilities into what's the best way

4   to reach people with disabilities for employment

5   opportunities, employment and training, etc.

6   Because the people with disabilities have such a

7   broad spectrum of the kinds of disabilities, so it

8   can't be a one-size-fits-all.

9   MS. VIVATRAT: Right. I totally,

10   totally see your point. I mean that can you give

11   us some examples with different segments of the

12   population who do have disabilities? What are

13   some of the things that have worked in terms of

14   reaching them and helping them with finding a job?

15   MS. HATHAWAY: Well, I know that there's

16   a lot of hope that the one stop centers at the

17   Department of Labor will become more accessible

18   and more helpful to people with disabilities, but

19   I'm not an expert on this. So I can't really

20   answer.

21   MR. FRUCHTERMAN: There's a lot of focus

22   on transition in our partnerships, especially with

1   high schools and community colleges. And so we've

2   partnered with different people around getting

3   essentially all the sort of job resources, all the

4   books, you know, that you might want to get. I

5   think that's just one small piece of it. The

6   other thing I want to mention is that, you know,

7   the Department of Ed has funded quite a number of

8   exciting projects and one of the ones that stuck

9   in my mind is a project aimed at autistic

10   basically job-seekers to do video based training

11   about appropriate behavior in the workforce. And

12   so it would take you through role playing and say,

13   you know, what do you say when your boss says how

14   was your weekend? You know, talk about this sort

15   of stuff. Don't talk about that sort of stuff.

16   You know, here's the how not to do it. Here's how

17   to do it. And I think that kind of material will

18   be more and more available in a broadband context

19   because if you get video access, you know, you

20   actually get more of the messaging around it. And

21   I think there's a lot of projects going on in that

22   direction, but that's one I've seen.

 1   MS. KANE: Great. Thank you.

 2   MS. SEELMAN: We're doing --

 3   MS. KANE: Sorry. Sorry. Go ahead.

 4   MS. SEELMAN: Which one?

 5   MS. KANE: Claude first.

 6   MR. STOUT: Firstly, I think you can

 7   look to on-line -- when you want to look to

 8   on-line training for people with disabilities, I

 9   don't know that you'd have much if any success.

10   There is voc rehab out there and there are some

11   examples of recruitment efforts to folks into the

12   private or public sectors. The problem is that

13   the bulk of the on-line resources certainly are

14   not captioned and they would not include any kind

15   of video interpreted version of it in sign

16   language. So it's about content and format and

17   supporting captions, video descriptions, sign

18   language inserts. And when you're talking about

19   this population -- serving them with on-line

20   resources -- that would be my response. And if

21   you don't base your resources on an accessible

22   mindset, it will just continue to further isolate

1   these populations.

2   MS. KANE: Thank you. Katherine, sorry.

3   MS. SEELMAN: It's alright. We're doing

4   a research project now on remote job coaching

5   which would replace the coach who would be right

6   there and one of the assumptions being that

7   sometime it's a bit embarrassing to have a coach

8   right with the person. Obviously, the smartphone

9   can be used for prompting, memory prompting. Task

10   breakdowns can be delivered through this. So, in

11   any case, that project just -- that research

12   project has just begun so we're going to look at

13   it.

14   MS. KANE: Very helpful. Did you have

15   something, Carrie?

16   MS. McDERMOTT: So I'd like to echo

17   everyone's thanks for your participation today and

18   I have a question directed toward Dr. Seelman.

19   I'm wondering if you could please comment on the

20   infrastructure, particularly in terms of bandwidth

21   requirement needs, to support the health IT

22   applications in use. So thinking about, you know,

1   as you go from text-based items to these high-def

2   video conferencing that that's going to require a

3   different infrastructure. And then if you could

4   also comment on some of the key barriers to

5   implementing the teleremediation and, you know,

6   ways you see us potentially helping with that.

7   Thank you.

8   MS. SEELMAN: I'm going to go backwards.

9   I think that since we're rolling out,

10   tele-information technology it's very important to

11   have public hearings that include people with

12   disabilities and older adults in the front line or

13   we're going to end up with retrofitting our health

14   system again and I don't see that we're doing it.

15   Now we -- we developed -- and this is the second

16   round of our engineering research center on

17   telerehabilitation. During the first round, we

18   developed a teleportal which is now being

19   transferred to UPM -- University of Pittsburgh

20   Medical Center -- which is exactly what you want

21   your technology -- to happen to your technology.

22   And they are going to test it and take on the

 1   liabilities of actually using it. I described

 2   that teleportal to you before. It's based on open

 3   source technology and it is scalable and it can

 4   provide both the confidentiality for the health --

 5   for the health record and on the one hand, and

 6   also bridge to something like Facebook, where an

 7   individual with disability can either use Facebook

 8   as a social networking situation or bridge into

 9   and use and have access to his or her own personal

10   records. And as I said, sometime we would like to

11   -- I'd like to bring our informatics person in

12   maybe next time and demonstrate this because it's

13   been highly successful thus far.

14   MS. KANE: That'd be great. Katherine,

15   I have one quick follow up question on the

16   teleportal from someone in the audience. And the

17   question is can the teleportal serve multi-user

18   treatments simultaneously?

19   MS. HATHAWAY: Yes.

20   MS. KANE: It can. Thank you. Ronnie?

21   MS. HATHAWAY: Now we're having a -- our

22   stroke (inaudible) has -- is using telemedicine

 1   for stroke and they're interested in introducing

 2   and using our web-based teleportal rather than an

 3   old video teleconferencing system that they have

 4   at the moment. So we're very pleased with the

 5   progress we're making. But I still think and hope

 6   that FCC will take a -- play a major role in this

 7   roll-out of health information technology.

 8   Because all the problems everybody has talked

 9   about in this room in terms of captioning, in

10   terms of descriptions are going to prevail here

11   also.

12   MR. CHO: I have a question, thank you,

13   for Mr. Stout. You talked a little bit about the

14   use of video in responding to an emergency. I was

15   curious to hear about any other applications, new

16   and innovative ways, that sort of can enhance and

17   enable greater accessibility to emergency and

18   public safety officials.

19   MR. STOUT: Well, you have video, voice,

20   data and -- you know what? I did want to call

21   attention to a couple things. Real-time text has

22   nothing to do with video, but I wanted to

1   emphasize that the Commission has been considering

2   opening a formal inquiry on real-time text. As

3   you know, historically we had been using TTYs that

4   would send a signal for another person and take up

5   the whole communication line. So what happens is

6   if we're on the computer -- not on a TTY machine,

7   but I'm talking about IP real-time text. If I'm

8   typing along, C-L-A-U-D-E. My name is not going

9   to go to the other person as a full word. They

10   are going to see the readout as it comes across

11   letter by letter, which is wonderful. Because in

12   an emergency situation, if I'm typing please help

13   me. Come to my house. My house is on 18812 Lake

14   Placid Lane and then it cuts off because maybe I

15   faint. The responder can in turn take that half

16   baked data, run it through something and then they

17   can come help me. If they're waiting for me to

18   have a full line, they might never get a full line

19   of information. So the character-by-character

20   display is vital. Also, in terms of video, I

21   think it's important that government and industry

22   really put their heads together and think way out

1   of the box and in terms of the regs and the

2   statutes that are on the books. Some things are

3   more of a hindrance than a help to how technology

4   really should be evolving over time. And we can

5   be held captive by what's on the books, right?

6   So, for example, we can see the full screen in

7   front of us right now. Why not at some point be

8   able to see a split screen and have, you know, CNN

9   on one side? Why can't I be talking with a first

10   responder on one side on the left that I can see

11   and have something else -- like the interpreter --

12   on the right side? It would be very, very easy,

13   very helpful because if I want to see my doctor on

14   one side of the screen, I can say look at my arm.

15   There's something wrong, etc. And we can talk and

16   my doctor and I will have a live conversation -- a

17   linkup -- because I can see the expressions on his

18   face. I can see the gestures that he's making and

19   I can see on the other side the interpreter. If I

20   were in the same room with the doctor -- it's as

21   though I was in the same room with the doctor. I

22   urge you at the Commission -- the policy makers --

1   I urge you to talk to deaf and hard of hearing

2   people about what best practices they would like

3   to see implemented and do include us, inquire of

4   us what we would like to see in the future. And

5   then we can make sure that the right -- the right

6   policies are developed and industry is catching up

7   with what we want to see and meeting our needs.

8   MR. CHO: Thank you.

9   MS. KANE: Extremely helpful. Thank

10   you. I think we have time for one or two more

11   questions from the audience. One I have is for

12   you, Jim, which is why does Bookshare rely on

13   peers to scan physical books and what are the

14   barriers that would prevent Bookshare from making

15   e-books available?

16   MR. FRUCHTERMAN: I think the reason we

17   chose peer production is because we were cheap.

18   We were trying to run a national library initially

19   on a million dollars a year and so we really

20   didn't have any money to put into book production

21   by professionals. Now that we've got much more

22   funding -- we're up to $7 a year with this

1   Department of Ed funding -- we still rely on our

2   volunteers to do a lot of the say trade books,

3   popular books, genre fiction and the like. But

4   now we actually have -- text books are especially

5   done by out source social enterprises that tend to

6   employ people with disabilities that actually do

7   the books. You don't get a lot of volunteers to

8   proofread the Political History of Macedonia from

9   1960 to 1980. It just doesn't fly off the shelf.

10   And so we actually do have paid people doing

11   proofreading. In terms of barriers, the biggest

12   barrier is proving that you have a qualifying

13   disability that qualifies under the copyright

14   exemption. This is a very contentious issue. We

15   don't pay royalties or get permission from

16   publishers because of this copyright exemption and

17   they're -- they're very concerned that we would

18   take away too much of their market. So we tend to

19   think that we serve the one or two percent of the

20   entire population that's most print disabled. We

21   see that at least 10 percent of the population,

22   especially in education, could benefit from

1   digital text -- kids with milder disabilities,

2   undiagnosed disabilities, English language

3   learners and the like. And it's probably the

4   biggest issue in our field because schools have to

5   educate all kids and they have this challenge

6   where we've solved a quarter of their problem

7   maybe.

8   MS. KANE: Thank you. I think one final

9   question from Elizabeth.

10   MS. LYLE: This is for Ishak. I was

11   just wondering if you could tell us a little bit

12   more -- I mean I can imagine lots of different

13   applications that might be very useful for people

14   with disabilities, but is thought going into as

15   you're designing how you're going to hook up to

16   the smart grid -- from people's houses the smart

17   grid -- how those -- how that itself can be

18   accessible to people with disabilities?

19   MR. KANG: So what -- like what the

20   product solution would be to ecosystem?

21   MS. LYLE: Right. So I mean if we want

22   to make sure that, you know, monitoring or

1   anything else that's being used -- you know, if

2   someone with -- you know -- say someone's having

3   trouble cooking and we want to know their energy

4   use is a lot lower because, you know, oh, they

5   might be sick. They're not cooking breakfast this

6   morning. And I know there are privacy issues with

7   that. But can we make -- are we going to make

8   sure that as we're installing this sort of

9   monitoring systems that people with disabilities

10   can actually use them in their house -- in their

11   home.

12   MR. KANG: I think that is the -- that

13   is the big solution to bring forth. I mean the

14   value of assistive technology with off-the-shelf

15   devices is very large. And, again, I could bring

16   up that this is a lot of the brainchild of Dr.

17   Gregg Vanderheiden of the Trace Institute and I

18   just recognized it as being a smart home developer

19   is that this is -- this is clearly inevitable and

20   so the key is the affordability and the privacy of

21   the data. Once it's digital, it's going to be a

22   situation where consumer trust is going to have to

1   outweigh the issues of who's getting my data. You

2   know, we talk a lot about Google and Facebook now.

3   Who owns the data? Well, you own it until you

4   give it to them. And once you upload it, it's now

5   theirs. And that gets to be a bigger issue.

6   Energy data is one thing. Monitoring of the home

7   -- you know -- remote sensor networks to see if

8   somebody's had a fall and to put forth some

9   actions and other things. Personal health records

10 is a completely important issue and these are all

11 going to come into place. People are going to

12 have to understand their personal health records

13 and how to control them. So we want to provide

14 all the contextual information into a standard and

15 allow people to have one user interface that's

16 dynamic enough to adjust to all the different

17 issues that they'll have to face.

18   MS. KANE: Thank you so much. This

19 concludes our panel. I want to thank all of our

20 panelists for such insightful contributions.

21 They've been enormously valuable. We look forward

22 to following up. Those of you who asked

 1   additional questions that didn't get answered,

 2   they'll be addressed in the public record. I

 3   believe we're breaking for lunch. And please take

 4   a moment to view the exhibits that are in the hall

 5   during the lunch break and you'll reconvene at?

 6   MS. LYLE: We'll -- the next panel will

 7   be starting at 1:30 sharp.

 8   MS. KANE: Okay. Great. Thank you.

 9   MS. LYLE: So you have a lot to do in

10   the next 50 minutes.

11   MS. KANE: Thank you very much.

12   (Recess)

13   MR. JOHNSON: I'd like to thank you for

14   coming to the Broadband Disability Workshop. I'm

15   Walter Johnson, Chief of the Electromagnetic

16   Compatibility Division. We have a very short time

17   schedule so we are going to make the introductions

18   very abbreviated. We have some great speakers,

19   but in the interest of time I'm just going to

20   introduce John Snapp from Intrado to talk about

21   next generation 9-1-1.

22   MR. SNAPP: Thank you very much. Before

 1   I can talk a little bit about the next generation

 2   9-1-1, I want to give us a little bit of the

 3   history as to sort of level set on where we are.

 4   The 9-1-1 system that we have today really has its

 5   roots back in the '60s. The technology that we're

 6   using today, the systems, the methodologies are

 7   all based still on these 1960's technologies --

 8   very slow, asynchronous modems connecting the

 9   PSAPs for data back into the network, very old

10   multi-frequency voice trunks connecting into the

11   PSAP. The system that was built back in the '60s

12   was built with the only telecommunication

13   technology that was there -- voice technology,

14   fixed wire line phones. What we're having -- what

15   we're seeing now is many new types of

16   communications, many new means that people are

17   able to communicate. You're seeing texting.

18   You're seeing video. You're seeing voice over IP

19   and all of these are creating challenges, but all

20   of these are having needs to access the emergency

21   network. On top of that, sort of the economic

22   downturn that we're seeing now has really put a

 1   lot of pressures on people. You're seeing a lot

 2   of people and we've heard about today a lot of the

 3   challenges of costs and of services. A lot of

 4   people in the past have had a landline phone and

 5   other types of phones. Now with the economic

 6   downturn, many people are abandoning their

 7   landline phones and going with the single type of

 8   communications -- be it a wireless phone, be it a

 9   VOIP-type device and the landline that we're used

10   to in the past is not there. Well, the problem we

11   have is the 9-1-1 system was built for this

12   landline phones that are decreasing and what we're

13   having is many people utilizing communications

14   devices have not optimized for the 9-1-1 network.

15   So one of the things that Intrado is doing -- that

16   we're trying to do -- is modernize the 9-1-1

17   network to support other types of technologies.

18   One of the things that's most necessary for that

19   is some type of IP connectivity into the PSAP. To

20   be able to take these next generation

21   technologies, IP is necessary (inaudible)

22   broadband connection is necessary for the PSAP to

1   receive these other types of communications. One

2   of the trials we're doing right now in a pilot is

3   is we're receiving SMS messages from wireless

4   carriers directly into a PSAP. We're really

5   experimenting on how does that handled inside the

6   PSAP? What type of connection is necessary in the

7   PSAP and how will these calls be handled? It's

8   been a real exciting technology. We're also

9   looking at other technologies of bringing video

10   directly into the PSAP. So then people could be

11   able to communicate directly into the PSAP with

12   other types of communications. I'm also looking

13   at pictures. Very often times a picture is a

14   great way to communicate. Just simply being able

15   to show the scene of what's happening and being

16   able to have the PSAPs be able to receive this

17   type of communications directly inside of the

18   PSAPs. One -- one of the real challenges as we

19   move beyond just the area of the PSAP, is as we

20   move to these new technologies, the 9-1-1 system

21   in the past, as I was saying, relies -- was a wire

22   line system on home wired phones and what was

1   provided to the emergency -- to the PSAPs was the

2   actual address of where the person was located

3   when they called 9-1-1. That address is what's

4   really needed for a first responder to be able to

5   find a person in need. The address is the most

6   accurate form of location and it's the best way

7   for somebody to actually be located. As we're

8   moving to many of these new technologies of

9   wireless-type technology and VOIP-type

10   technologies, there's a real challenge on actually

11   locating where they are. Many of the wireless

12   technologies provide and x,y. That's not good

13   enough to find a person inside of a house. You

14   can't take an x,y and accurately determine the

15   location inside of a house. The VOIP technologies

16   today require on people preprovisioning addresses.

17   People move around. That's a real challenge on

18   where they are to be located. But it's still --

19   what's needed is this type of an address to

20   determine the location. The next generation

21   systems are really sort of -- we're creating the

22   foundation to allow these new type of

    1   technologies, the location -- the technologies of

    2   text and video and other services along with other

    3   types of location and other types of information

    4   to be provided to the PSAP so the person could be

    5   more accurately found and help can be provided to

    6   that person quicker. Addresses and other types of

    7   information -- there is more than one piece of

    8   information that needs to be provided to a PSAP.

    9   There may be multiple addresses that the person

   10   has and they may -- where they may be located. So

   11   the next generation network with this more of a

   12   higher bandwidth of connectivity can provide this

   13   additional information into the PSAP so that

   14   people can be found quicker. Thank you.

   15   SPEAKER: Thank you.

   16   MR. JOHNSON: We're going to hold

   17   questions until all the speakers have completed.

   18   The next speaker is going to be Gregg

   19   Vanderheiden. He's Director of the Trace Center

   20   of the University of Wisconsin and he's going to

   21   be talking about the impact I believe of cloud

   22   computing.

 1   MR. VANDERHEIDEN: Thank you. I've been

 2   involved in technology in disability now for 38

 3   years and starting in (inaudible) and then

 4   broadening into telecom and computer access and I

 5   think this is perhaps the most exciting, but also

 6   one of the most challenging periods of time. I've

 7   been asked to talk about cloud computing in four

 8   minutes or less and its potential for

 9   accessibility. So this is my four minute quick

10   take. Cloud computing is going to create a number

11   of challenges of its own, but if we can harness

12   the power of cloud computing and basically cloud

13   computing is being able to run systems and

14   applications and services that aren't on your

15   computer so much as they are out in the internet

16   -- in the cloud -- in the internet and on the

17   servers and things connected to it. It looks like

18   they're in front of you. Those of you who use

19   g-mail or Google docs or even Google search and

20   looked for information on your computer are

21   actually not looking for it there. Those are all

22   applications that run in the cloud, so you're

 1   actually operating in the cloud. If we can

 2   harness the tremendous potential of using the

 3   cloud and create -- invest in -- an open tool set

 4   for doing that, we can lower the cost of AT that's

 5   used to access the internet. We can build access

 6   into the internet itself so that anyone would be

 7   able to sit down to any computer anywhere and be

 8   able to invoke the access features that they need.

 9   We'll talk more about that. We would have better

10   access for orphan disabilities and for

11   disabilities that are actually not well served

12   today because of the size and market. We could

13   also raise the power in the effectiveness of the

14   free and public open source technologies. And

15   finally, we could increase awareness and

16   accessibility for elders and present it in a way

17   that would be more acceptable to them. Now a

18   consortium of industry academics and free and open

19   source groups are actually proposing such a system

20   under the title of the National Public Inclusive

21   Infrastructure, which you've heard about in some

22   of the comments. So, imagine an infrastructure

```
 1    composed entirely of software that lives in the

 2    internet that would allow anyone to sit down to

 3    any computer anywhere and invoke the access

 4    feature.  So, you could have people who are blind

 5    who would have either free public access features

 6    or even commercial AT.  But it wouldn't just be on

 7    one computer.  They could borrow your computer and

 8    access the web in the same way that I could.  It

 9    would allow people needing special interfaces to

10    be able to have them on the different computers

11    that they run into throughout their day and we're

12    running into them in employment, education,

13    government services.  There's even companies now

14    that the only way you can apply for a job is if

15    you apply on-line.  It would allow elders to be

16    able to approach a computer and be able to use it

17    without having to have special things.  They would

18    just -- the computer would adapt to them.  It

19    would allow people who can't even afford a

20    computer or a connection to be able to use the

21    computers that they find in their environment.

22    Now, imagine at the same time that this
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    1   infrastructure includes a rich set of tools that

    2   allows people to develop new types of assistive

    3   technologies to meet the new kinds of technologies

    4   we're finding on the internet and to better

    5   address the disabilities. For example, we have

    6   the I-phone and if you've seen the I-phone, you've

    7   seen how by providing the right set of tools that

    8   you can very quickly make applications. You have

    9   people who aren't even programmers creating

   10   applications and we have an incredible burst of

   11   creativity and variety and competition from

   12   commercial through free public kinds of AT so we

   13   can lower the cost to develop in this fashion. We

   14   can open up development to users of AT, to

   15   practitioners, to small businesses so that you

   16   don't have to have, you know, $10 million to start

   17   out. And we can also create better free access

   18   tools so that those who don't have resources. So

   19   these are some of the things that we think the

   20   cloud and something like a National Public

   21   Inclusive Infrastructure could do and in looking

   22   forward we really think that it's probably the

1   only way we're going to be able to provide

2   meaningful access to the majority of individuals

3   who don't have the resources and especially those

4   who have few or no resources as we've heard today

5   to devote to technology. Thanks.

6   MR. JOHNSON: Thank you. Okay. Next

7   will be Greg Elin, CTO of Life Without Limits,

8   talking about open architectures.

9   MR. ELIN: Thank you, thank you very

10   much and thank you for having me and United

11   Cerebral Palsy here today. United Cerebral Palsy

12   is a 60 year old organization whose mission is to

13   advance the independence, productivity and full

14   participation of people with disabilities through

15   an affiliate network. We provide community

16   support in a variety of situations and we do a lot

17   of work in childhood development, housing and

18   independent living and employment. I'm actually

19   UCP's first Technology Officer as well as the

20   Director of the Life Without Limits, which is an

21   initiative of UCP focused on adapting to the

22   user-driven, technology enabled future of full

          1   participation that the internet and technology is

          2   enabling. The creation of this position should

          3   indicate the importance in which technology -- the

          4   web, mobile, open source software, open source

          5   hardware, desktop fabrication -- impacts both our

          6   constituents and our organization. I'd like to

          7   sum up Life Without Limits by kind of saying that

          8   we're more interested in developing jet packs that

          9   we can all use than we are incremental

         10   improvements in wheelchairs. I want to talk just

         11   very briefly about open architectures,

         12   architecture for participation and the importance

         13   of peer-to-peer. I'm very bullish on the ability

         14   of communities to develop their own solutions to

         15   problems if not stymied by gatekeepers, high costs

         16   or aging business models. I happened to be at

         17   Nynex, working on set top box requirements in

         18   1994, when the web hit and Nynex Bell Atlantic PAX

         19   Bells video-focused information super highway

         20   effort had its clock cleaned by Tim Berners-Lee

         21   and the world wide web. The lesson that I drew

         22   from that has been proven over and over that large

 1   enterprises must service their largest block of

 2   existing customers and innovation always takes

 3   place speculatively at the edges and on the

 4   unserved fronts of the customer base where it's

 5   uneconomical for large businesses to play. Those

 6   with needs and aspirations drive application

 7   innovation much more so than those with ongoing

 8   business concerns. I would like to point out that

 9   I read a paper recently which pointed out that

10   feature development often comes from edges and

11   customers, whereas reliability often comes from

12   manufacturers and providers. Where we see

13   mandates by federal government to implement

14   technologies, we see these implementations by

15   providers and nothing further. To my knowledge,

16   there's been no Craig's List, no Wikipedia or no

17   App Store built on top of TDD -- of TTD.

18   Equipment remains expensive in part because so

19   much of it is landlocked with no connectivity to

20   the cloud. Where Facebook and Twitter make core

21   data and function available via an API to third

22   party developers and companies like Google and

1   Microsoft, court -- actively court third-party

2   developers often our network providers argue

3   dictator-like over the necessity of absolute

4   control over their network for security purposes.

5   So I guess to sum up, I'm a very strong believer

6   that one of the most important things to enable --

7   to enable greater access is to allow people to

8   help each other and come up with their own

9   solutions. One thing that I'm keenly aware of at

10   United Cerebral Palsy is that there's an entire

11   infrastructure of people helping other people that

12   exists in managing logistics associated with

13   persons of various abilities. Those logistics are

14   much easier to manage if they can take place in

15   the cloud or through web services, whereas they're

16   much more difficult to manage in environments

17   where there's no bandwidth and things have to go

18   back to paper-based communications.

19   MR. JOHNSON: Alright. Thank you.

20   We're going to open this up now to questions and

21   I'm asking all the panel participants feel free to

22   participate. But let me start off by asking a

     1   question that was actually brought to my mind by

     2   John Snapp. He referenced the going back 60 -- to

     3   1960s in terms of 9-1-1 technology. At that time,

     4   we had a single telephone network in this country

     5   -- the Bell System. How do we achieve a

     6   nationwide 9-1-1 or emergency -- whatever NG 9-1-1

     7   is in the future -- how do we do that on a

     8   nationwide basis in a reasonable timeframe? John?

     9   MR. SNAPP: Of course I have to answer

     10   that one a little bit. It -- I don't think we --

     11   we can't do it overnight. It's not going to

     12   happen. It's not going to happen overnight and

     13   just be done. It's going to happen incrementally.

     14   We're seeing -- so as we're seeing interest out

     15   there in next generation 9-1-1, there are a few

     16   leading PSAPs around the world -- around the

     17   country -- that are very interested in upgrading

     18   the system with -- knowing that it's a higher cost

     19   for them right now without seeing the immediate

     20   benefits. And so many of these are the leaders

     21   and are looking at doing it to see how it really

     22   can help them, because there's not a lot of access

     1   technologies to come into the PSAP. There's still

     2   voice. But they're looking at sort of leading the

     3   way and I think we're seeing that as we start to

     4   get those out there, then others will see -- there

     5   will be other access technologies that will be

     6   able to access into the PSAPs. We're seeing the

     7   text trials starting with that. Now we're seeing

     8   the VOIP -- I mean VOIP services that are already

     9   at it going in there. And then we're starting to

    10   see pictures come in and other videos. So as we

    11   enable a few PSAPs to have broadband access to

    12   receive these new technologies, the other PSAPs

    13   around the country are going to see the value and

    14   we'll start seeing more and more come on. It just

    15   -- it takes -- we've got to get started on it and

    16   that's what it's doing. And one of the biggest

    17   challenges is getting broadband access for the

    18   PSAPs so that they can receive these -- these

    19   other types of technologies.

    20   MR. JOHNSON: Let me redirect the

    21   question maybe to Greg Elin. Out of -- if not

    22   1,000 points of light, a few points of light, can

1   you build a national network with an -- you know

2   -- on a standard architecture or do you wind up

3   with 1,000 points of light?

4   MR. ELIN: Well, I guess I'm going to --

5   I'm going take a little bit of the stanza. I

6   think when I -- when we look at the internet and

7   we look at other developments, I'm actually a big

8   believer that you have to have some type of

9   transitional technologies. Nicholas Negroponte

10   liked to say that the facts delayed the digital --

11   the electronic office by 20 years and I think

12   that's actually incorrect, because I think if you

13   did not have the facts as a kind of transition,

14   speeding communications, you wouldn't have got

15   there. Likewise, if we didn't have the -- if we

16   didn't have the -- if we had tried to move from an

17   analog phone network to a digital network, we

18   would have never gotten there. And it was virtue

19   of the fact that we had -- that we had modems that

20   we were enabled -- that people were able to start

21   doing the internet on top of the existing

22   infrastructure. So as painful as it might be, I

1   would actually say that we have to be happy with

2   whatever type of -- with approximate location and

3   other things when it comes to E-9-1-1 and other

4   services to move the ball forward and figure out a

5   way where you can service the innovators or

6   service people that have critical needs and are

7   willing to pay either extra money or do creative

8   work themselves. But if the goal is to have a

9   single solution that gets rolled out at one point

10   in time, that solution in my opinion will never

11   arrive. It hasn't arrived yet, and it won't

12   arrive because we're past the point -- we have to

13   focus on interoperability and getting early

14   adopters willing to work with some stuff.

15   MR. JOHNSON: But let me ask -- and this

16   is the last question I'm going to ask on this

17   subject. But in a mobile environment where people

18   can travel across the nation, doesn't

19   non-uniformity of services pose a challenge and a

20   danger at the same time?

21   MR. ELIN: Well, but -- it also -- it

22   also provides an opportunity and it depends on how

1   we think of the problem. Right now we're trying

2   to serve -- we're trying to solve the problem

3   largely by point-to-point communications from the

4   device back to the service provider, which keeps

5   us in a very old architecture and an old business

6   model regardless of what we implement. If we said

7   for a second hey, my phone has the capability of

8   triangulating with other devices that happen to be

9   nearby -- whether that's a WIFI device or someone

10   else's phone -- and I can use other things for

11   triangulation. If I think about an E-9-1-1

12   message which goes out and is multicast to

13   different services rather than to a single center

14   point, you open up possibilities of alternative

15   solutions. But right now I think that with my

16   limited knowledge of the system, it's still taking

17   an older architectural approach which is heavily

18   centralized on how E-9-1-1 is going to be

19   resolved.

20   MR. VANDERHEIDEN: There's one other

21   piece you can use. Transition -- again I was

22   going to echo the same thing -- is really a key

 1   issue, because you can't get there without -- and

 2   especially the 9-1-1 system as you're pointing

 3   out. How do you -- you can't bring everybody up

 4   all at once, so how do you do it? One of the

 5   things you can look at is a technique you've used

 6   in the relay centers and stuff and that is it may

 7   be possible that you could have some of your

 8   higher technology 9-1-1 traffic route to a

 9   high-technology point that would then redirect it

10   in low technology back to the local point. So,

11   for example, one of the things that we've been

12   talking about is people who are deaf are now all

13   on SMS, but how are we going to make all of the

14   9-1-1 centers do SMS and if they're not, does that

15   mean that they have no access? But what if they

16   SMS to a central point that would then act as a

17   relay and it would then call back. And so now you

18   both have somebody who's taking the SMS, who's

19   used to communicating with somebody who's deaf,

20   which has tremendous advantages, to 9- 1-1 centers

21   talking to a person in voice, which is what

22   they're used to doing every day and so now you've

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1    actually done it, but locally they haven't made

2    the change.  And then slowly over time as they

3    come on line you can -- from that central center

4    -- you can have more and more technology, but they

5    can still communicate with the low and the high.

6    So there's hybrid approaches we can use to try to

7    do this, but we really need to be thinking

8    transition, transition, transition.

9              MR. JOHNSON:  Great.

10             MR. HATFIELD:  Maybe just to add another

11   thought --

12             MS. LYLE:  Just announce your -- I'm

13   sorry.  Just for the captioners.

14             MR. HATFIELD:  I'm Dale Hatfield,

15   University of Colorado.

16             MR. JOHNSON:  A distinguished alumnus of

17   the FCC, by the way.

18             MR. HATFIELD:  I was just going to --

19   maybe John can comment on too, but I really am

20   infatuated with a notion of the virtual PSAP too.

21   It goes back a little bit to the -- Greg's point.

22   We tend to think of a PSAP as a location.  Of
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  1   course on the internet, there's a person who has

  2   special capabilities could be answering that call

  3   at home and doing some of these functions and so

  4   there's that notion of a virtual PSAP I think has

  5   lots of -- lots of attributes that might be --

  6   might be useful.

  7   MR. JOHNSON: Final question. Final

  8   answer.

  9   MR. SNAPP: I'd like to sort of echo

 10   that with what Dale was saying. That's exactly --

 11   may be the way all, I think, all of these ideas

 12   are very possible. In the PSAP world, the idea of

 13   a virtual PSAP or a regional PSAP or a statewide

 14   that may be able -- that may be more technically

 15   advanced that could handle the new technologies

 16   that are coming out during a transition period.

 17   You may see somewhere in the more of a statewide

 18   center answering something or it could even be in

 19   another state that are taking some of these calls.

 20   Or it could be a completely different relay center

 21   that are taking some of the more advanced calls as

 22   the transition occurs around the country.

 1   MS. LYLE: I guess the transitional

 2   question -- this is Elizabeth Lyle -- the

 3   transitional question that I had relates to cloud

 4   computing. How do we transition to that?

 5   MR. VANDERHEIDEN: The -- one of the

 6   things that we were looking at the NPII plan is to

 7   start with using what we call sneaker net -- you

 8   know, things you use -- so you can actually put an

 9   entire collection of different access features and

10   technologies on a drive and you can use that to

11   allow people to come up in the same -- in this way

12   we can work with today's technologies and things

13   that are not always connected or not reliably

14   connected. We can develop the distribution

15   system, the support system. We can -- a really

16   key part is okay, so I've got all these different

17   things. How does a person figure out which

18   products or which features or which settings they

19   should be using? So we can develop all of that in

20   that environment while we're developing the cloud.

21   And then as the cloud matures, we've seen some

22   examples recently of why we wouldn't want to rely

1   100 percent on the cloud -- today. But we know we

2   will get there. You think back to the automobile,

3   and, you know, going out in the country in an

4   automobile around the 1900s was taking your life

5   in your hand because they broke all down all the

6   time and no place to repair them. So -- so we --

7   there is a transition plan in place there. But

8   that's really a critical question. And then it

9   allows us to take the advantage of both this --

10   technologies we have today and this model, by the

11   way, has already been done in Canada and it's been

12   in place for five or ten years -- five years. And

13   so we have models for doing that kind of a thing

14   there. We just need to extend it.

15   SPEAKER: Thank you.

16   MR. FRUCHTERMAN: And I think another

17   issue around -- this is Jim Fruchterman of

18   Benetech. I think another issue around this

19   transition -- let's say in the area of assistive

20   technology for people who are blind or visually

21   impaired -- is that access to the web has been

22   such a crucial element of accessibility today for

1   both personal, educational and employment reasons.

2   There is a very smooth transition from using

3   Microsoft Word with your screen reader to using

4   Google docs with your screen reader to using

5   Google docs with a web-based AT project and so

6   you've got this pretty smooth transition. It's

7   not as hard edged, but for the person who can't

8   afford a screen reader, they've just gone from no

9   accessibility to some accessibility. And so, for

10   example, we and Mozilla Foundation just made this

11   Firefox plug-in that I was demonstrating at lunch

12   time and if you have a screen reader, it gives you

13   all this navigation capability around your e-book,

14   which screen reader users would love to have. But

15   if you don't have a screen reader, we just have a

16   plug- in that speaks the book aloud and you can

17   navigate just in the browser. So, I think some of

18   this interoperability stuff becomes quite smooth.

19   A last example -- a lot of people know that you

20   have to script applications to make them work for

21   blind people. Well, Google TV-ROM and Charles

22   Chen have made something called access jacks which

1   is the cloud based version of scripts for all the

2   web-based applications, all the rich internet

3   applications so that not only can you have a

4   script, but you could also get it over the

5   internet, which also gets around the issue of oh,

6   I don't have the script for this application.

7   Well, boy, now you do because they've just moved

8   all that infrastructure into the cloud away from a

9   distribution system where you had to get a CD

10   through the mail and install it and maybe you got

11   updates every six to twelve months.

12   MR. JOHNSON: Can I ask a follow up

13   question to both Jim and Greg? Both of you have

14   addressed mass market appliances. You've talked

15   -- Greg talked about walking up to any computer

16   and you've talked about various handheld devices.

17   Is the implication that these devices solve many

18   if not most of the issues -- at least have the

19   intrinsic capabilities with things like -- with

20   the addition of cloud computing and other

21   technologies to support a broad base of

22   applications for the disabled or do you see a need

1   for further refinement of the computer or handheld

2   appliances to better support? Could you just

3   comment on that? I mean I was intrigued. You

4   didn't call for any improvements in these devices.

5   MR. VANDERHEIDEN: When we talk about

6   the National Public Inclusive Infrastructure,

7   we're actually talking about not only what's in

8   the cloud, but also what you use to view the

9   cloud. So part of that infrastructure is actually

10   working with the computer companies, the operating

11   systems, the browsers, manufacturers. For

12   example, right now, the -- if you have a website

13   and you want it to talk for people who come to it,

14   you can pay 10, 20 $30,000 for that feature and

15   people use it who have a computer that has a voice

16   synthesizer on it because you have no way of

17   getting to that. And a matter of fact, the voice

18   synthesizer on the computer is going to be faster

19   and better and other things. By working with the

20   vendors, we can have it so that the -- the

21   resources on your own computer can be part of your

22   solution. And as Jim pointed out, you can have

1   the situation where if you have great tools here,

2   you use them. Or it uses them in a coordinated

3   fashion. If you are someplace else and you don't

4   have your powerful tools, then you have the tools

5   in the network so that you're not cut off. And

6   one thing about cloud computing to access what's

7   on the internet -- and that is you can't be cut

8   off from the internet while you're on the

9   internet. Okay. If what you're doing is

10   accessing the internet, and you say well, what if

11   you don't have connection to the internet? And

12   the answer is well, then you don't have to worry

13   about access, because you're not connected. So

14   one of the key issues is as we move to more and

15   more work with an internet-based work, the tools

16   and the connectivity will be there for us to draw

17   from.

18   MR. JOHNSON: We have a question, by the

19   way, from the audience while we're on this topic.

20   It says what considerations should the government

21   include in their solicitations for cloud services?

22   Should screen reader capabilities as requirements

1   for cloud services be specified? In other words,

2   should we adapt the current specifications to

3   recognize more of the needs of the disabled? And

4   if so, how?

5   MR. FRUCHTERMAN: Greg, can I grab this

6   one?

7   MR. ELIN: (inaudible)

8   MR. FRUCHTERMAN: I don't think you

9   include screen reader compatibility. I think you

10   include best practices around web accessibility

11   because that implies screen reader capability and

12   a whole bunch of other accessibility issues. So

13   -- and I think that, you know, we have 508. We

14   have the web accessibility initiative. We have

15   some best practices that are already in place and

16   I do think the government, as it goes out there

17   and provides services, has to -- you know --

18   include these standard accessibility provisions,

19   which are already long.

20   MR. VANDERHEIDEN: Yeah. I second that.

21   And the other thing is if you try to insist that

22   people have -- build their own screen reader, if

1   you will, in, you have a problem in that there are

2   many, many other disabilities. And even if you

3   say well, you need to make it work with this or

4   that AT, what you really want to do is to make

5   content that is generally accessible because it

6   needs to be accessible to all disabilities, not

7   just the ones that you can imagine. Finally,

8   mainstream developers can't really understand

9   accessibility across all the disabilities. It's

10   very hard. As a matter of fact, even people in

11   the area specialize usually in one or another

12   area. So the better thing to do is to follow the

13   accessibility guidelines, etc., that basically

14   expose the information and then leave it to the

15   other end. And, in fact, as we create better

16   accessibility tools, that will be easier. We can

17   actually ask for less. The better the tools are,

18   the less accommodation that's needed on the other

19   end.

20   MR. JOHNSON: Okay. I'm going to jump

21   -- just in the interest of time. This is -- I've

22   participated in a number of workshops. Be aware,

1   this is the shortest timeframe I've worked

2   against. So, you guys are to be applauded.

3   Internet captioning -- what I mean by that is the

4   captioning and transport of text based information

5   associated with a video is -- today on the

6   internet, you know, there is a sort of a hit and

7   miss enterprise. Even when you start out with

8   captioned material, you might not wind up with

9   captioned material. Any of you want to comment on

10 the issues and the problems you see and what --

11 maybe what needs to be done as we go into the

12 future? By the way, this was an issue also in the

13 recent HDTV transition.

14   MR. FRUCHTERMAN: I think the one thing

15 I would mention -- I mean obviously we have some

16 proposed legislation -- the 21st Century Act and

17 the like. I think the main thing for me is not

18 losing captioning that already exists. I mean

19 that's like the biggest crime you could imagine,

20 right? It was there in broadcast, and now -- oops

21 -- it's on the internet and we've lost it. And

22 there's a lot of people who are working on that.

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 1    You know, HULU does a good job of actually

 2    capturing that material.  I think that's really

 3    above -- you know, that's the biggest thing to me

 4    is let's make sure that we've got it.  There's --

 5    Gregg, I don't know if you have more on that one

 6    or other people.

 7              MR. VANDERHEIDEN:  Yeah.  Three things I

 8    would say briefly.  One is don't lose it if it's

 9    there.  And there ought to be a rule that says if

10    it's there -- and some people say, well, I got it

11    from point B and so did you and you created

12    captions -- you're a broadcaster, for example --

13    at point C, so I don't have the captions because I

14    got it before you captioned it.  And if there was

15    anything like I had to have it for my customer, I

16    would have made an agreement so that when you

17    captioned it, it flowed back to point B and I

18    would pick it up.  It's not that it can't be done,

19    but our system isn't set up that way.  And the

20    answer is well, then set it up that way.  So one

21    of the things is don't lose them and if they are

22    out there someplace, reattach them.  Secondly --
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 1   repair. What people will say is yes, I know. But

 2   when they captioned it, they cut out three minutes

 3   by taking every other frame out so they could get

 4   another commercial in. So their captions won't

 5   match my video, because my video is -- you know --

 6   one minute longer than their video and so the

 7   captions will be all messed up. I've even watched

 8   movies where I saw captions show up for language

 9   that wasn't in the show because they had cut it

10   out. The -- but that can be repaired. And so

11   fund somebody to actually work on a repair

12   technology. This is not, you know, rocket

13   science. It's just not. And the third thing is

14   easy captioning -- better tools to make it easier

15   to caption. Again, if you could take it, give it

16   to a transcriptionist. They could just type what

17   it says and then you could have it auto matched

18   back up. There are things that could be done to

19   simplify captioning to get it back up.

20   MR. ELIN: I would just -- I would just

21   like to add in here that I think that captioning

22   is one of the areas where we see -- where what we

     1   don't see right now is how third -- we don't see

     2   easy ways for feedback loops with users

     3   themselves. So there isn't a way -- a lot of this

     4   is thought of as an authorship role. When the

     5   producer produces a video or when the broadcaster

     6   broadcasts it, it needs to be captioned. And,

     7   indeed, it should be. But at the same time, if

     8   it's not, what is the alternative for third

     9   parties to caption it, for individuals to say hey,

    10   this is the most important video that we would

    11   like to have captioned, for them to find out

    12   through a center where captions exist, for them to

    13   rank the quality of the captions. We see all

    14   sorts of commenting, tagging of photos and all

    15   sorts of user-contributed feedback on YouTube and

    16   everything else and yet captioning seems to be

    17   this realm in which it is as fixed as the video

    18   itself as opposed to being something that is

    19   community-generated, commented on and added to.

    20   MR. JOHNSON: That's an excellent

    21   comment especially in light of where we are going

    22   I suppose to where we've been.

1   MR. ELIN: Right.

2   MR. JOHNSON: You know, captioning was

3   the province of the major networks and television

4   producers. I can put a picture of my cat up on

5   YouTube and --

6   MR. ELIN: And everyone's going to

7   capture that.

8   MR. JOHNSON: -- and get eight million

9   hits.

10   MR. ELIN: Right.

11   MR. JOHNSON: So I'm not sure where

12   we're going in captioning in the future, but

13   having the ability to allow third parties is a

14   very important concept. Let's see.

15   MS. LYLE: We can go to speed of

16   service. There's a question from the audience if

17   you -- and then you can go back to (inaudible).

18   MR. JOHNSON: Okay.

19   MS. LYLE: And then you can go back to

20   (inaudible). One of our topics is, you know,

21   speed of service and we essentially are asking,

22   you know, what speed of service is necessary to

1   support accessible applications across all

2   platforms and whether accessibility features will

3   be precluded in a wireless environment? And, in

4   fact, someone from the audience specifically said,

5   you know, in our national broadband plan are we

6   going to have a footprint for our deaf mobile user

7   to have video calls on new mobile phones for 9-1-1

8   calls? And almost no calls can do that. So if

9   someone could address that general -- and that's a

10   specific example as well.

11   MR. ELIN: Well, I have a small anecdote

12   related to --

13   SPEAKER: Name?

14   MR. ELIN: Greg Elin. And I have a

15   small anecdote related to a local affiliate. One

16   of our local affiliates -- they are involved with

17   Allegheny Children's Center in Sparta, North

18   Carolina. And my understanding is there's only

19   one broadband provider in that neighborhood and

20   they run a piece of software called ProCare for --

21   that helps with child daycare management services.

22   The parents can check in on their kids, can

1   arrange for pick up times and I think that that

2   type of services is a harbinger of telemedicine,

3   of remote presence, of caretaking, etc. Now the

4   problem is is that it's constantly being

5   overloaded on the bandwidth that they have. Many

6   services require not only the bandwidth for the

7   package communication, but a lot of back and forth

8   set up, hand shake maintaining the open

9   connection. When there is a sufficient floor of

10   two way bandwidth, it's very easy to grab

11   off-the-shelf internet protocols like FTP or SIP

12   or other things and establish those connections.

13   But if your bandwidth is not steady or doesn't get

14   above a certain floor, what happens is is that the

15   quality of those connections you start dropping in

16   all sorts of different ways. So there -- I think

17   that there is a kind of core issue around --

18   around speed in terms of getting above a certain

19   floor for the protocols and having a certain

20   headroom for peak volumes. Because if all the

21   parents come to the child center -- try to use

22   that at the same time -- and the bandwidth breaks

1   under that load.

2   MR. JOHNSON: Let me jump in on top of

3   that though. Is this an area where the needs of

4   the disabled are different and need to be

5   accounted for or when you look at the general

6   population, the need for speed, the demand for

7   broadband services that the mass market basically

8   is going to push it forward. Do you see unique

9   needs here or do you see that the opportunities

10   created by mass market will benefit?

11   MR. VANDERHEIDEN: This is Greg

12   Vanderheiden. The answer is yes and no. The --

13   one of the things is that most of what --

14   currently, for example, on a phone call, you need

15   a certain bandwidth. If you want to do a video

16   phone call, you need a much higher bandwidth. But

17   the much higher bandwidth is a fraction of what

18   you need for a HD television show. Okay? So if

19   we're talking from the past, we need more

20   bandwidth. Or if you're going to categorize it

21   and say well, phone calls only get so much

22   bandwidth, then you have a problem because a

1   disability phone call will need more bandwidth

2   than an audio phone call. But when every -- and

3   when everybody is making video phone calls, they

4   may not care if the face is jerky or it's -- you

5   know -- whatever. But for sign language, that

6   would be devastating. However, when you look down

7   the pike and you look at the bandwidths that we're

8   going to be having, when you look at the fact that

9   people want to be running all of their broadcasts,

10   if you will, over the IP instead of the air and

11   things like this, then you find that the

12   accessibility needs are really quite small

13   compared to the needs for, you know, two people

14   watching an HDTV show streaming at the same time.

15   You can have, you know, 50 people signing, so it's

16   not -- that's not the place. But, what we -- what

17   we worry about is that there isn't a bandwidth

18   issue, but there isn't an ability to ensure that

19   the bandwidth is in the right places and that in

20   an emergency that it will be there for the people

21   who are signing or that people will categorize --

22   this is sort of a net neutrality thing. Also we

 1   need to watch out for, you know, blanket

 2   statements --

 3   MR. JOHNSON: Could you explain? I want

 4   to make sure. Could you explain that very last

 5   comment? If it's a net neutrality thing.

 6   MR. VANDERHEIDEN: Okay. The -- that

 7   one opened up.

 8   MS. LYLE: In one minute or less.

 9   MR. VANDERHEIDEN: I will do it in one

10   minute or less. For example, there are

11   accessibility services that are peer-to-peer that

12   do not have to do with file sharing and yet many

13   places are just shutting down anything that's

14   peer-to-peer as a category because they saw

15   something. It's actually sort of a typecasting

16   discrimination -- you know. I saw some

17   peer-to-peer I didn't like, so I'm going to shut

18   down all peer-to-peer.

19   MR. JOHNSON: Well, let me just under

20   the net neutrality principles, that's discouraged.

21   MR. VANDERHEIDEN: Oh, no, no. I'm --

22   I'm saying that net neutrality is -- I have

1   comments separately very positively speaking for

2   net neutrality. I think it's really critical for

3   accessibility. And one of the reasons is that you

4   will never be able to categorize all of the

5   different types of access features and so you

6   could never make exceptions for them. So we need

7   to make sure that it stays open.

8   SPEAKER: (inaudible)

9   MR. JOHNSON: The agenda now calls for

10   Dale and, if we have time, Jim to wrap -- wrap up

11   some comments. So, Dale you go first.

12   MR. HATFIELD: Okay. Find my notes

13   Thank you. I'm Dale Hatfield. I -- if you'll

14   indulge me just a little bit, I thought I would

15   end with a personal note here. When I was here at

16   the FCC in the late 1990s under Bill Kinnard, I

17   held what's now Julie Knapp's position of Chief of

18   the Office of Engineering and Technology and I

19   spent quite a bit of my time working on disability

20   access issues with people like Elizabeth. And at

21   the time I was just absolutely fascinated by the

22   promise of the internet and internet-based

1   services and equipment to help people with

2   disabilities. And I was also exposed to the

3   potential problems with that when I got involved

4   in the case of the TTY digital cell phone

5   incompatibility issues. So I saw the real promise

6   and I saw the -- I saw the challenges as well.

7   And especially when disability access

8   requirements -- the problems when disability

9   access requirements are not factored in early --

10   in the early stages of network and equipment

11   design. Despite my interest and work on the topic

12   at that time, I confess that I did not fully

13   appreciate its importance until my wife was

14   diagnosed -- and I'll choke up here -- with ALS or

15   Lou Gehrig's disease shortly after I retired from

16   government service in the late -- in late 2000.

17   As my wife, Pat, has steadily weakened from this

18   terrible disease, the importance of disability

19   access is driven home to me on a daily basis by

20   her sweet smile of triumph when she is able to do

21   something independently -- often for me I should

22   say -- or when I see the frustration and tears in

1   her eyes when she's not able to do something

2   because of the lack of accessibility. So while I

3   am still fascinated by the technology and promise

4   of broadband's ability to deliver voice, data,

5   text, image and video services to increasingly

6   sophisticated devices at any time and any place,

7   it should be no surprise perhaps that I feel -- I

8   feel very strongly about making sure that these

9   services and equipment are accessible to people

10   with disabilities through whatever combination

11   that marketplace forces voluntarily actions and

12   regulatory intervention that is necessary. I

13   commend the Commission under Chairman Genachowski

14   for holding these workshops and panels to help

15   ensure that the national broadband plan

16   facilitates exactly that result. Thank you.

17   MR. JOHNSON: Jim, do you have any

18   closing thoughts?

19   MR. FRUCHTERMAN: Yes. I think the --

20   what I would say is -- I started my career as a

21   high-tech entrepreneur, starting high-tech

22   companies in Silicon Valley, and the great thing

      1   about being based in Silicon Valley and the

      2   disability field is that you can see the future

      3   because the disability is 10 years behind -- at

      4   least. And so you can just look at what's

      5   happened in the last five years in Silicon Valley

      6   and predict the future pretty accurately. And so,

      7   some of the things that I would just observe from

      8   this is that when I started Benetech, our pitch

      9   was we'll do for $2 million what a regular

     10   high-tech company will do for 20. People are

     11   starting new high-tech companies based on cloud

     12   computing for $250,000. And so the barrier to

     13   innovation has gone way down and it has a lot of

     14   different impacts. The first is people only make

     15   one version of software. This is the idea of

     16   software as a service. People throw something up

     17   really quickly, before they figure out how it's

     18   going to pay for itself and see if it sticks. And

     19   if it does, then you have the energy to reengineer

     20   it. And so what that means is that you're doing a

     21   new release of your software every two weeks or

     22   every four weeks. You also are pushing more and

1   more activity to the community to actually provide

2   that information back to you because now you have

3   a cheap way of doing it. So if you pull all these

4   things together, we have really exciting

5   opportunities. And part of something like the

6   national public inclusive infrastructure is making

7   it easy for these kind of innovations to happen.

8   And I'll give you two quick examples.

9   Universities are inventing all this great

10   technology and a grad student can come up with an

11   exciting new innovation that an organization like

12   ours -- or a for- profit if it's actually viable

13   as a for-profit -- can then turn into a real

14   product. And so one example is Karen Erickson at

15   UNC Chappel Hill. She wants to help mentally

16   disabled young adults learn to read. And she's

17   putting up a website where people can put up

18   stories to use for this sort of basis. Two

19   hundred stories a week are coming in now.

20   Essentially there's all this unmet desire to

21   share, to help, to volunteer, to call to action.

22   And we just have to -- through the infrastructure

1   that we do -- unleash all the creativity and

2   energy that exists in the disability community and

3   in the communities of people who care about people

4   with disabilities. And it's not just about doing

5   for the people who can afford the $5,000 solutions

6   or the $500 solutions. It's getting the entire

7   spectrum down to someone who has a $20 MP3 player

8   and we have to get them access and the $40 or $50

9   cell phone -- we have to get them access so that

10   access becomes the rule rather than the exception.

11   And I think that's really what's exciting about

12   this advent, is it's making that vision practical

13   in the next five or ten years.

14   MR. JOHNSON: Thank you very much. I'd

15   like to thank our panelists. This is -- my only

16   regret is we only had an hour to do this. This

17   would have been a great session to extend. Thanks

18   for coming and your participation is very valuable

19   to the FCC. Alright. Thank you very much.

20   (Recess)

21   MS. LYLE: Welcome to the Policy

22   Roundtable. We're ready to get started. We have

1   a very full afternoon, and we're going to be very

2   strict with time limits. And I'll explain that in

3   a second.

4   But right now, it's my privilege to

5   welcome Commissioner Michael Copps.

6   COMMISSIONER COPPS: Thank you. I will

7   be strict with the limits, too. I'll just -- I

8   made a little talk when we had our last workshop,

9   so I won't repeat that today -- on the 20th of

10   August. I've been listening to some of this

11   upstairs as time allowed today. It has only

12   increased my dedication to making sure that

13   disabilities access issues have a front-and-center

14   integral component of the Broadband Plan that's

15   going to be coming forth from this Commission in

16   February. It's just so clear to me, listening to

17   the testimony here -- I think in August somebody

18   said, technology available to the disabilities

19   community probably lags what's available to the

20   rest of us by 10 or 20 years. Jim Fruchterman

21   said "10 years" just a few minutes ago.

22   That's not satisfactory. We've all

    1   heard in the last couple of weeks the statistic

    2   with -- I think it's 75 percent of the Fortune 500

    3   companies only hiring off of the internet. The

    4   old ways don't work anymore.

    5   So this is more than just a convenience

    6   or luxury. It's quality of life. It's the

    7   necessities of life, the basic elements of life.

    8   All you had to do was listen to Dale Hatfield's

    9   moving closure at the last statement to understand

    10   what a human face it has. All of you know that

    11   from your own experience much better than I could

    12   ever express it.

    13   So I just want to repeat my dedication

    14   and my determination -- and I think it's shared by

    15   all of my colleagues -- to make sure that this

    16   issue is really taken as far as we can possibility

    17   take it in the Broadband Plan.

    18   I also, before I close, want to give you

    19   a few further details, in an effort to try to

    20   bring more visibility to this issue, get more

    21   attention to it, bring it to the attention of not

    22   only decision-makers and folks here in Washington,

  1   but people around the country.

  2   We're going to have a hearing on Friday,

  3   November 6, over at Gallaudet University. It will

  4   be a full Commission hearing. All the

  5   Commissioners are invited to attend. We will be

  6   building on the record that we amassed here in the

  7   filings and in the August hearing, and now in this

  8   workshop here, too. And that will be held in a

  9   multipurpose room in the Jordan Student Academic

 10   Center, 800 Florida Avenue, Northeast, starting at

 11   9:00 a.m. on Friday, November the 6th. So I hope

 12   as many of you as possible can be there.

 13   We'll have a couple of panels, at least.

 14   We'll probably have a technology showcase or

 15   workshop, where we can see some of the latest

 16   technologies that are available, and also talk

 17   about how we can make sure that folks from the

 18   disabilities community are present at the creation

 19   of those technologies, rather than just being

 20   recipients of something that sometimes works but

 21   sometimes may not work.

 22   So it's going to be an important

1   hearing, and I'm looking forward to it.

2   Last, I want to thank Cheryl King, the

3   workshop coordinator, and others in our CTB,

4   (inaudible) on our AV staff for putting all this

5   together, and Elizabeth Lyle and others on the

6   Broadband Team who are fully engaged in this

7   effort and doing a tremendous job.

8   And I hope to stay down here as long as

9   I can. I think I'm going to have to leave in

10   about an hour. But I thank you all for your

11   participation.

12   MS. LYLE: Great. I think I'm just

13   going to ask all the FCC people who are up in the

14   front just to briefly introduce themselves if they

15   have a word or two they'd like to say, please do.

16   And then we'll get started.

17   MS. SCHNEIDER: I'm Jennifer Schneider.

18   I'm with Commissioner Copps. And I can't say it

19   any better than my boss, so I'll just pass the

20   mike on.

21   MS. RICHARDS: I'm Mary Beth Richards,

22   Special Counsel to the Chairman on Reform. And

1   I'm particularly interested in the discussion

2   about what the FCC and other agencies need to do

3   to better address accessibility issues.

4   MS. SMITH: Sherrese Smith. As I met

5   most of you this morning and have already

6   discussed the importance of these issues to the

7   Chairman, and we look forward to hearing your

8   suggestions today.

9   MR. GARR: And my name's Erik Garr. I'm

10   the General Manager of the Broadband Plan. This

11   issue is very important to the Plan, and I'm

12   looking forward to hearing the discussion.

13   MS. LYLE: Great. I think, as we've all

14   contacted through e-mail, this is the format.

15   Three minutes, we're going to have a buzzer go

16   off. We're going to cut you right off. We have

17   to do that. And then we'll have a response period

18   afterwards where we might ask a few questions, but

19   we'll really try to categorize it according to,

20   you know, recommendations you have with respect to

21   whether more legislation or subsidies is needed,

22   what issues that we should have consumer,

1   industry, government fora address and, you know,

2   how the FCC and other agencies can improve to

3   better address accessability.

4   So, with that, we're going to get

5   started.

6   MS. SMITH: Actually, very quickly --

7   MS. LYLE: Oh, sorry.

8   MS. SMITH: -- Cheryl put me in charge

9   of being the taskmaster today.

10   Please turn your cell phones off.

11   That's very important, so that people who are

12   listening in, you know, won't be disturbed by

13   that.

14   In the case of an emergency, the exits

15   are in the back. If we need to stay in this room,

16   this can also serve as a shelter. Hopefully, we

17   don't have to use that function today.

18   We already talked quickly about the

19   timing. Please be very thoughtful, particularly

20   with the size of a group. We want to make sure

21   that we stay on time. So please pay attention to

22   the timing clock.

1   We also have some people who are logged

2   in online and are participating for the Webinar.

3   All input today will be included in included in

4   the Broadband Docket. And if we don't have time

5   to hear from the people online or the people in

6   the audience, we will still record other input

7   into the Docket today.

8   And then finally, and most importantly

9   -- panelists, before you speak, please remember to

10   introduce yourselves so that we can have a record

11   of who you are before you speak.

12   Thanks very much.

13   MS. LYLE: Great. Okay, with that, we'll

14   get started. We're going to start with Kathy

15   Brown, who is Senior Vice President of Public

16   Policy Development and Corporate Responsibility at

17   Verizon.

18   MS. BROWN: Hello, Elizabeth, thank you.

19   Commissioner Copps, thank you so much. I'm, like

20   Dale, very, very pleased to be back in this

21   wonderful place where I was able to spend some

22   good time, also in the late '90s, on disability

1   issues. Many of the friends I made at that time

2   are sitting around this table, and it's very good

3   to see you all again.

4   I'll try to take one minute for each of

5   the recommendations I have -- so, without further

6   ado.

7   This is an area of practice for the

8   companies -- Verizon who I work for -- that is

9   enormously important, because the technology is

10   changing so quickly. And just as in Verizon the

11   technology has to change and adapt across all of

12   our companies it has to, my first recommendation

13   for the Commission in an ongoing way is to really

14   have the fora where best-practices are put on the

15   table, where the sharing and collaboration that I

16   know we do with many of our -- both our

17   technologists, but also our customers -- those

18   customers who have different needs for the

19   technology -- are able to express that, and were

20   able very early on to look at design issues that

21   are enormously important. So at Verizon, as part

22   of our Corporate Responsibility Executive

1   Committee, we have a Products and Services

2   Committee inside the company that looks at

3   products and services as they are developed. We

4   can learn from each other, and I think that's a

5   number one recommendation for all of us sitting

6   here.

7   Number two, the law is out of date.

8   When we first were able to work on these issues

9   here at the Commission, we worked under a statute

10   that defined telecommunications services in one

11   way and communications services in a definition

12   that is now antiquated.

13   So we are happy and pleased that we're

14   working, I think jointly and collaboratively, with

15   many of the folks around this table to update

16   those laws. We're appreciative of Congressman

17   Markey's efforts in this regard, and we want it to

18   go forward.

19   And, finally, we have to empower

20   enforcement. There was a lot of work done, I

21   thought, to set the stage for real enforcement of

22   the kinds of principles and standards that were

1   needed to push forward accessibility across these

2   technologies. Without that kind of ongoing

3   effort, and the intervention, frankly, of folks

4   here at the Commission who are willing to push

5   this agenda forward in an enforcement mode, I fear

6   that it just doesn't move fast enough.

7   Thank you. I did it.

8   MS. LYLE: Thank you very much. All

9   right. Good model for all of us.

10   Next up is Grant Seiffert, who is the

11 President of the Telecommunications Industry

12 Association. And joining us from Chicago, and

13 representing him at the table, is Rebecca

14 Schwartz.

15   MR. SEIFFERT: Hello everyone. Thank you

16 for the invitation, to Mr. Copps and Elizabeth.

17 It's great to be a part of this. Again, as Kathy

18 suggested, many of us have been around these

19 tables in the past, and I'm just -- I apologize I

20 could not be there in person. I appreciate all of

21 my colleagues and the work that they've done up to

22 this point.

1   As many of you know, TIA member

2   companies design, produce and deploy a wide

3   variety of devices representing the equipment

4   industry. And our goal is, of course, to make

5   technology accessible to all Americans. And I

6   know that objective, in that objective we share

7   that with the Commission.

8   Industry has worked on a voluntary

9   basis, and productively, with the disability

10   community for many, many years, for several

11   decades. As many of you know, TIA is an SDO -- a

12   standards developing organization -- and we have

13   really benefitted from having an SDO so closely

14   working with the Commission in the past.

15   As far as TIA working, looking forward

16   to working with the Commission, we believe the

17   National Broadband Plan is certainly an idea

18   vehicle to address the broadband accessibility

19   issues and create, you know, workable solutions to

20   bring broadband to all Americans.

21   Of course, we have e technical expertise

22   to offer to augment the Commission's understand

 1   with these complex issues, and we will work in

 2   concert with the Commission in developing

 3   achievable solutions.

 4   As I mentioned, broadband certainly will

 5   play an essential role in guaranteeing the

 6   continued evolution of these products and

 7   services. As noted in our comments, our first

 8   recommendation to the Commission is to make sure

 9   that there must be a specific definition for

10   minimum broadband that includes two-way

11   transmission. Certainly this would enable two-way

12   live video communication that is critical for

13   those who are deaf and hard of hearing to have

14   full access to the national communications

15   network.

16   And also we believe the national

17   broadband plan should allow a lifeline and link-up

18   fund to be used for broadband.

19   We think those two recommendations are

20   critical to the success of hooking up all

21   Americans, and making it accessible --

22   communications so accessible and a valued part of

 1   their lives.

 2   So I'll end there, Elizabeth, and look

 3   forward to the rest of the discussion.

 4   MS. LYLE: Thank you, Grant. You're

 5   under, too. Good job. Next we have Randy Pope of

 6   the National Association of the Deaf-Blind. My

 7   understanding is Randy wants to reserve your time

 8   to the response time. Is that correct?

 9   MR. POPE: It is.

10   MS. LYLE: Okay. We will move on, then,

11   to Gregg Vanderheiden, who is the director of the

12   Trace Center of the University of Wisconsin,

13   Madison.

14   MR. VANDERHEIDEN: Thank you very much.

15   I think that we need to recognize that we are

16   moving into an area of all new technologies, and

17   we need to both enable and to facilitate the

18   future.

19   As we're looking at the new

20   technologies, a key opportunity we have that we

21   shouldn't miss is to build accessibility in from

22   the beginning. We always talk about how important

1   it is. We now have that opportunity -- actually

2   it's starting to slip through our fingers already

3   with VOIP being rolled out. But we need to get

4   accessibility in or else it won't work later.

5   Trying to add it on later, it doesn't

6   get tested. It wasn't there when the original

7   stuff was developed. The installed base won't

8   work with it. And the terrible thing about

9   telecommunication is that if it doesn't work at

10   any point from one end to the other, it doesn't

11   work at all.

12   And this is a very severe concern.

13   We're already finding trouble when you try to move

14   beyond voice and have video travel with it, when

15   you want text to travel with it. We're finding

16   firewalls and other types of architectures are

17   being designed, the gateways are being set up in

18   ways that they don't support, et cetera.

19   We need to look at ways to do this, and

20   we need to already be looking at ways that will

21   work robustly when part of the network won't

22   support. And so that's key.

1   The TEITAC came up with some consensus

2   provisions around real-time text. And we heard

3   from the consumer groups earlier the importance of

4   this. And we would strongly endorse the FCC

5   adopting these, because they are forward- looking

6   and will provide tremendous new capability for

7   real-time text.

8   On part that was not specified was the

9   interoperability component. That is, if you --

10   the recommendations allow companies to use any

11   technology they want to within their systems, as

12   long as they support one standard at -- or they

13   interconnect.

14   And that was left open at the time. It

15   is critical that the FCC identify and specify one.

16   Because without that, I know a number of companies

17   that are basically doing -- sitting back, want to

18   do something, but they can't do anything until

19   they know what it is.

20   And without a specific standard

21   specified, there can't be any interoperability,

22   because people develop different ones.

1   I yield any time left to my colleagues.

2   MS. LYLE: Thank you, Gregg. Next we

3   have Dale Hatfield, who is the Executive Director

4   of Silicon Flatirons.

5   MR. HATFIELD: Yes, thank you very much.

6   I think I can go quickly because much of this has

7   been touched on by others. First, I think -- and

8   must fundamentally, perhaps, without even needing

9   to be said -- clearly the Act needs to be changed,

10   or whatever, to make sure that the accessibility

11   requirements apply to internet-based services and

12   equipment.

13   Second, I really support efforts like

14   Gregg's, what Gregg is proposing, to build on the

15   notion of cloud-computing, for example, to build

16   accessibility tools and to devices and services

17   from the get-go, and promote open architectures

18   and open platforms that turn loose the creative

19   abilities of people everywhere -- including in the

20   private sector, academia, the public, non-profit

21   sectors and so forth -- to build in accessibility

22   into products and services quickly -- to enable

1   them to build in accessibility into products and

2   services, quickly, economically and tailored to

3   the specific needs of people with disabilities.

4   Clearly, I think, too, this is an area

5   that ICT service and equipment providers have a

6   duty to do the right thing. So I would urge forms

7   of self-regulation -- the best- practices, I

8   think, that Kathy Brown mentioned -- to avoid as

9   much as possible the need for government, direct

10   government regulation and intervention. However,

11   as mentioned, strong enforcement is ultimately

12   needed, as well.

13   And also because people are constantly

14   coming into the industry, new people coming in,

15   new startup companies and so forth, I think in all

16   fairness they're not always aware of the

17   accessibility requirements. And so I'm not sure

18   just how this fits in as a recommendation, but

19   touched on before, the notion of the bully pulpit

20   and so forth.

21   So I think the Commission can do a lot

22   just by constantly talking about, in speeches and

1   other fora, reminding people of their -- of the

2   importance of this area, sort of the raised

3   eyebrow. And then, as mentioned before, then

4   ultimately to the extent that the voluntary

5   actions and the bully pulpit doesn't work, then

6   having appropriate enforcement to make sure people

7   do do the right thing.

8   MS. LYLE: Thank you very much, Dale.

9   Next we have Ellen Blackler, who is the Executive

10   Director at AT&T.

11   MS. BLACKLER: Thank you, Elizabeth.

12   Thank you. In addition to supporting the

13   legislation at AT&T that Kathy talked about, I

14   wanted to highlight a couple other things that I

15   think would be relevant for a Broadband Plan. One

16   is, I think there's a real opportunity to lead

17   through example in the government, through making

18   the -- improve the accessibility of web content

19   and services, and kind of going beyond the

20   requirements of 508, or going beyond the minimal

21   compliance with 508 and 504, and really trying to

22   do more of that in spirit.

1   It might be interesting, as part of the

2   data collection, to do a real assessment of how

3   much of the government content is accessible and

4   how much isn't, and really get some facts to work

5   with. And then working with the user community,

6   think about w here are the best places to focus,

7   so that we're not spending a lot of time on

8   content that, you know, isn't really important to

9   the consumers in terms of priority.

10   And by that same token, exercising

11   leadership in this kind of complicated issue, this

12   great opportunity Dale talked about, about all

13   this creativity, and people who can solve this

14   problem makes it actually more difficult from a

15   regulatory perspective. And to get all the right

16   people in this really complicated ecosystem

17   together to pull in one direction, I think the FCC

18   can do that by really focusing on the technical

19   requirements that need to get done, and what are

20   the standards and protocols.

21   And I think if we can identify a couple

22   issues -- AT&T identified a couple in its comments

1   -- that the FCC can grab a hold of and bring the

2   right people together, and really get to the

3   bottom of these standards and protocols and

4   technical issues, then you've got an opportunity

5   for all of those different parts of the ecosystem

6   to unleash their creativity on it.

7   And in our comments we identified

8   captioning of internet content and real-time text

9   for access to emergency services, and kind of the

10   next generation IP, emergency services

11   environment, as two great places to start.

12   MS. LYLE: Great.

13   MS. BLACKLER: Oh, I've got a minute

14   left. I could keep talking.

15   MS. LYLE: Okay. Thank you, Ellen.

16   Next up is Deborah Buck, who is the Executive

17   Director of the Association of Assistive

18   Technology Act Programs.

19   MS. BUCK: Thank you. And thank you for

20   allowing AATAP to have a voice at the table today.

21   Let me tell you briefly about AATAP, because it

22   gives some construct to our remarks.

1   We are a member-based organization

2   representing the State Assistive Technology Act

3   programs, which are located in every State and

4   U.S. Territory. The programs are funded by the

5   Department of Education, and provide an array of

6   services such as device demonstration,

7   re-utilization, refurbishment of devices, device

8   loan for trial loan periods to try out devices,

9   State financing activities, et cetera. Five our

10   programs also run the telecom distribution program

11   in their State.

12   One of the other activities the AATAP

13   does is we are under contract with the U.S.

14   Department of Education to assist the AT programs

15   in collecting and reporting their data

16   requirements in alignment with the statutory

17   obligations of the Act. So while we have some

18   data, I think it might be valuable to you. I'm

19   not going to cite it, but we can connect off-line

20   to share that.

21   AATAP would like the FCC to consider

22   embracing and expanding the telecom distribution

1   program, and looking at making it a consistent

2   initiative to obviate the disparity that currently

3   exists. Currently, there are four States that do

4   not have telecom distribution programs. And while

5   you may say, oh, four States, that's pretty, good,

6   do not have it, those four States -- three of the

7   four are very large States. And the total

8   population of those four States equals 40 million

9   people -- or the total population of 25 other

10   states that do have telecom distribution programs.

11   Currently, as well, the telecom

12   distribution programs are very disparate in terms

13   of eligibility criteria, the types of devices that

14   are available, whether they are ceded to the user

15   as it becomes their ownership, or whether they are

16   long-term loan.

17   We would like to see a review of this

18   and an expansion and an infusion of Federal

19   investment to ensure that everyone in the nation

20   has access to a program, and also to expand it to

21   broadband accessibility. Broadband -- the

22   internet -- is the way services are going to be

1 provided -- education, employment, etcetera -- and

2 there are viable activities that can be

3 undertaken.

4   The FCC needs to make some clear-cut

5 decisions, thought, in terms of is it going to be

6 an eligibility-based program, an entitlement

7 program, or a combination thereof. There are a

8 variety of programs where you can give equipment

9 to individuals, do rent-to-lease discount

10 programs. There are a variety of options to look

11 at.

12   Lastly, in terms of embracing this kind

13 of initiative, ideally you want to make

14 everything, have everything available to everyone

15 who needs it. You also don't want to be the place

16 of first resort, where everyone says, "We'll just

17 go to the FCC, the Telecom program, to get your

18 AT." At the FCC needs to engage your other

19 Federal partners to look at what other funding

20 sources are available -- Medicare, Medicaid,

21 education, voc rehab -- to engage and look at

22 collaborative funding, blending streams, and

1   addressing some of the research (inaudible)

2   currently exit.

3   MS. LYLE: Perfect! Thank you, Deborah.

4   Who else can do that?

5   Next we have Rob Atkinson, who's the

6   President of Information Technology and Innovation

7   Foundation.

8   MR. ATKINSON: Thank you. I'm going to

9   imply that everyone who went earlier that didn't

10   use their time has allocated it to me. So -- I'm

11   very glad to be here. We issued a report last

12   summer called "Digital Quality of Life," and we

13   had a special, we had a chapter on disability, and

14   how IT is playing a role in disability. And I

15   understand, maybe, some people s frustration with

16   the pace, but on the other hand, there are a lot

17   of amazing things that are going on. For example,

18   we documented a device in there for visually

19   impaired people that lets people have a

20   GPS-enabled, voice- activated device that they can

21   walk around with, and it can give them voice

22   commands, "Turn right here," or "Turn left here."

1   You couldn't have done that five years ago. The

2   technology wasn't good enough. It's now good

3   enough to be able to do things like that.

4   Increasingly, technology to let people

5   control computers with their brain-scan,

6   brain-waves directly, without having to use a

7   keyboard, or other things like that.

8   So I think I would stress that, at the

9   end of the day, innovation is probably going to

10   provide a lot of the answers here. And we should

11   really be focusing a lot on that.

12   This is a world that 20 years ago was a

13   relatively straightforward world to deal with,

14   when you had very few devices and very few

15   channels. We're in a world where it's going to be

16   very difficult to have, I think, regulatory

17   mandates cover everything and get the kind of same

18   results we had a few years ago. So that suggests

19   that we're going to have to really focus on

20   innovation to try to get technologies that just

21   work and are easy to do, and can be embedded in

22   everything we do.

1   How do we do that? I think one of the

2   key ways to do it is we need to support more

3   innovation efforts there. For example,

4   considering the role of prizes, the White House,

5   recently in their Innovation Policy, talked about

6   the role that prizes can play. I think prizes

7   could play an important role here.

8   I think, second -- to build a little bit

9   on Kathy Brown's comment about the importance of

10   collaboration and cooperation -- there's a program

11   that the Defense Department funds for the

12   semiconductor industry, called the "Focus Center

13   Program," and it's a collaborative effort to bring

14   the industry, government and universities together

15   around semiconductor technology.

16   It seems to me that it might be

17   appropriate to think about a focus center program

18   for disabilities technology that would be jointly

19   funded by the IT and telecom industry and by

20   government, and housed at universities to really

21   begin to understand what the technology road map

22   is for the future, where we need to go, what are

1   the gaps, and how we can fill that -- either

2   through getting companies to collaborate more, or

3   by dedicated research specifically oriented to

4   that.

5   Thank you.

6   MS. LYLE: Thank you very much, Rob.

7   Next up is Patrick Halley. He's the Director of

8   Government Affairs at the National Emergency

9   Numbering Association.

10   MR. HALLEY: Thanks, Elizabeth. And

11 thank you for including 911 and emergency services

12 issues in this discussion.

13   At NENA -- we're a national non-profit

14 association that's dedicated to advancing 911

15 issues -- modernizing the 911 system, moving from

16 an analog, voice-only system to an IP- based,

17 broadband-enabled 911 system is our primary focus.

18 It has been for the last year or two, and it will

19 continue to be so.

20   And I thought it was interesting, a

21 comment was made earlier, that technology for

22 individuals with disabilities is always 10 years

 1   behind. And while I understand where that was

 2   coming from, in a way it's almost the opposite for

 3   911 right now, in the sense that individuals with

 4   disabilities are using video and text as their

 5   primary form of communication, and that is the one

 6   way you really can't access 911 today -- unless

 7   it's a TTY device.

 8   And so that is why we're -- I think

 9   access for individuals with disabilities is a

10   driver for us, at least, in terms of modernizing

11   the 911 system.

12   I want to make a few points in terms of

13   what we can in regards to the Broadband Plan.

14   First, I think we can all agree that we

15   have to ensure all consumers, including

16   individuals with disabilities, have access to

17   broadband networks, services and applications.

18   And I say that because it is the primary form of

19   communication for individuals with disabilities,

20   and it's probably the best way that they can

21   access 911, is using modern technology. And we

22   have to ensure that they have access to broadband

1   networks and applications that can connect to a

2   911 system that's able to receive that

3   information.

4   One of the people that's in charge of

5   our accessibility committee within NENA was

6   telling me about a trial she was doing Washington

7   -- I think with the university -- where she was

8   doing mobile ASL, sign language via mobile

9   communications devices. And one of the problems

10   they had was the speed. It just wasn't fast

11   enough. And so she could see somebody signing

12   using a another mobile device, which she thought

13   was amazing, but it was blurry. And they had to

14   slow down how fast they signed to each other.

15   So we need to make sure that there's

16   sufficient spectrum and capacity out there so that

17   the folks have devices that are useful to them,

18   which will be of benefit in emergency services.

19   We have to, second, ensure that the 911

20   system is IP-based, broadband-enabled, and that

21   that is the foundation of the system. A lot of

22   times at the commission we talk about public

 1   safety broadband needs, and all we talk about is

 2   mobile first-responder broadband needs --

 3   important, but so too is ensuring that our 911

 4   systems have access to broadband. And I don't

 5   know that that issue gets enough discussion, as

 6   compared to the mobile broadband needs.

 7   Third, we have to focus not just on the

 8   regulatory requirements of the originating service

 9   providers -- whether they're wireless or wire-line

10   -- but also on the underlying 911 system itself.

11   And there has to be a joint focus on what are the

12   requirements on those who provide services to the

13   consumers, and what can we do to actually make

14   sure the 911 system is capable of receiving those

15   forms of communications. We have to have that

16   discussion at the same time, otherwise it won't

17   work.

18   And lastly, funding -- obviously. We

19   made a decision in 1996 to use universal service

20   funds, for example, for internet access for

21   schools. We need to have that discussion for

22   public safety broadband, as well.

1   Thank you.

2   MS. LYLE: Thank you very much, Patrick.

3   Next we have Larry Goldberg, who's the Director of

4   the Media Access Group at WGBH.

5   MR. GOLDBERG: Thank you. And thank you

6   for inviting me here today.

7   The Media Access Group at WGBH is where

8   captioning of television began and where video

9   description of TV was invented, and our R&D work

10   now at our Carl and Ruth Shapiro Family national

11   Center for Accessible Media is focusing on

12   bringing access to all media and technologies

13   anywhere, any time.

14   A few obvious points right now -- one of

15   the major drivers of adoption of broadband service

16   in this country and around the world is the

17   widespread availability of rich media that

18   broadband makes possible. It's the killer ap of

19   broadband. And I'm not just talking about

20   entertainment or user- generated videos -- though

21   those are pretty compelling attractors for many

22   people. There are also broadband educational

1   resources for learners from pre-K to post-grad,

2   and job training and re-training video courses,

3   interactive health information and care-giver

4   communications, emergency information -- as we

5   just heard -- and social networks all rely on

6   broadband. These are the drivers of our national

7   purposes for broadband adoption.

8   If you consider the factors behind why

9   broadband adoption among people with disabilities

10   is low, of course cost is a major factor. But if

11   all of these attractive and valued services are

12   not accessible to you, why would you even consider

13   doubling or tripling your monthly cost for

14   information and entertainment that is clearly not

15   made for you? Accessible online media is the

16   killer ap for this community, and far too little

17   is available today.

18   So what needs to be in place to make

19   broadband media services accessible? As we've

20   heard, for people who are deaf or hard of hearing,

21   captions are requiring. For people who are blind

22   or visually impaired, descriptive narration is

 1   required.

 2   For creators of content, standards and

 3   authoring tools are needed to create captions and

 4   descriptions. And for distributors of content,

 5   standards for carriage and display are needed.

 6   Well, in fact, we basically have all of

 7   those requisites -- or will within months.

 8   Vendors of services, and hardware and software

 9   tool developers have stepped forward with numerous

10   competitive offerings. The Department of Ed's

11   NIDRR division has funded much groundbreaking R&D,

12   and OSEP funds a lot of production. Of course

13   we'd welcome a lot more resources there.

14   By the end of this calendar year, SMPT

15   and the W3C will have come together on a unified

16   time-text captioning format, so broadcasters and

17   webcasters will finally be able to caption once

18   and play everywhere. That's a long-held goal.

19   So what else is needed? The way is

20   clear, and the will -- well, maybe that's a role

21   our government's legislators and regulators need

22   to play. Because today it's all about

 1   implementation.

 2   Will we need legislation and

 3   regulations, like the TV Decoder Circuitry Act,

 4   and the Telecom Act of '96 to create pervasive

 5   availability of media online? Well, there are

 6   many dedicated corporations represented in this

 7   room who could, and even want to deliver on this

 8   promise. I know. I've heard from them.

 9   Incentives are needed beyond the

10   invisible hand of the market -- which I think we

11   all recognize simply fails for this population too

12   often. The notion of voluntary efforts too often

13   appears to be an oxymoron to people with

14   disabilities.

15   So perhaps with the combination that

16   Dale Hatfield mentioned of a perhaps something

17   like a disability impact statement to help raise

18   awareness, with the public and private efforts,

19   our national broadband strategy can serve all

20   Americans, at all times, everywhere.

21   MS. LYLE: Great. Thank you very much,

22   Larry. Next is Claude Stout. He's the Executive

1   Director of the Telecommunications for the Deaf

2   and Hard of Hearing. We're having microphone

3   problems, Claude.

4   MR. STOUT: I hope this doesn't impinge

5   upon my three minutes. I don't want to lose my

6   time making sure that the microphone is supposed

7   to be working. All rightee. If I could beg your

8   indulgence and have you travel with me back in

9   time, realizing that deaf and hard of hearing

10 people have only just finally realized access to

11 911 services. This was 13 years ago. Just three

12 years ago we could finally watch -- supposedly --

13 100 percent captioned programming. Just

14 two-and-a-half short years ago my father and I

15 were able to have a perfectly natural conversation

16 through video relay.

17 So, please, take our consumers -- our deaf and hard of

18 hearing people and all people with disabilities --

19 take our word, and take it seriously: broadband is a

20 possible medium for the future that can liberate and

21 completely empower us.

22 We ask that you consider the best practices -- like

 1   Ms. Brown has brought up, like Ellen has brought up,

 2   at AT&T -- and all of these folks who are really

 3   studying the best way to go about things, and follow

 4   their lead. There's lots of companies who don't take

 5   disability access seriously, and it all boils down to

 6   one word. Accountability.

 7   In the area of captioning, frankly, the Commission has

 8   written a lot of rules on the topic. And folks, at

 9   the same time, have not done their part, and have not

10   followed on, followed through, with their

11   accountability. Whether that falls through in

12   enforcement or implementation, the consumers are stuck

13   in the process.

14   And we are not able to fully have our accountability

15   met in the way that we can level complaints and so

16   forth. And you would have to comply with audits and

17   enforcement and on down the line in order to really

18   make broadband available for all Americans.

19   And I thank you.

20   MS. LYLE: Thank you very much, Claude.

21   Next up is Joe Waz, who's a Senior Vice President

22   of Comcast Corporation.

1   MR. WAZ: Thank you, Elizabeth. The

2   cable industry has been very active with the

3   National Broadband Plan Task Force on many issues

4   associated with broadband adoption, and the

5   adoption by the community of people with

6   disabilities should be no exception. And we want

7   to get equally engaged in that area.

8   We're hearing compelling stories from

9   Dale Hatfield, and Claude and others here today

10   about how life changing broadband can be, and life

11   enhancing broadband can be for people with

12   disabilities. But we know penetration levels in

13   that community are comparatively low. We're

14   hearing many of the reasons why today, in terms of

15   accessibility and some of the challenges.

16   We need to work together to change that.

17   So I think as step one, we would agree with many

18   of the organizations here today that have asked

19   the Commission itself to serve as a clearinghouse

20   for efforts by the industry, by advocates for the

21   community, and by the government, to educate

22   people with disabilities about how broadband can

1   benefit them, to inform them about technologies

2   that can make broadband more accessible, and to

3   point to ways, sources for funding and support.

4   Claude referred, or actually Larry

5   Goldberg referred to the importance of video as a

6   driver in this phase. And there's been much

7   discussion of video over the internet during the

8   course of the Broadband Plan activities. The

9   cable industry, of course, has worked with the

10   disabled community for many years to promote

11   accessibility in our traditional video business.

12   The video programming we deliver to cable

13   customers, of course, is closed captioned,

14   according to FCC rules. And we're looking to make

15   closed captioning available for online video.

16   We're participating in a broad-based, ad

17   hoc group of the Society of Motion Picture and

18   Television Engineers to address technical issues

19   to permit the retention of captioning when video

20   moves from television to online delivery, and also

21   to caption made for internet video.

22   And cable is also part of an FCC

1 technical working group that's assessing issues

2 around closed captioning and video description as

3 we have completed the move from analog to digital

4 television.

5   We'd like to keep building on this

6 collaborative model to the extent we can.

7   I want to second Rob Atkinson's concerns

8 about the difficulty of regulating what is

9 becoming an increasingly decentralized area. An

10 open internet means an awful lot -- it's an awful

11 lot harder to impose mandates and standards,

12 especially globally. But I support his call for

13 novel ideas, like prizes and incentives, and the

14 focus center that he referred to.

15   As universal service subsidies are

16 rethought, I think we need to rethink their

17 applicability in the context of helping people

18 with disabilities, as well, as we re-frame

19 universal service for a digital age.

20   And, finally, I would note the BTOP

21 program. I guess Danny Weitzner was here this

22 morning and mentioned that there are a handful of

1   applications for BTOP dollars that would promote

2   accessibility.

3   We have, as an industry, worked with

4   several organizations looking to promote adoption

5   in low-income and non-English- speaking

6   communities. We'd like to do the same with the

7   disabilities community.

8   MS. LYLE: Thank you very much. The

9   next on the agenda is Karen Peltz Strauss, who's

10   the Co-Chair of the Coalition of Organizations for

11   Accessible Technologies.

12   MS. PELTZ STRAUSS: Thank you. Just

13   yesterday in The Washington Post there were two

14   articles that talked about the importance of

15   broadband. One of them talked about web health

16   sites, and it talked about how the number of such

17   sites has climbed from 500 -- to 500 from 35 about

18   four years ago. And it talked about the patient's

19   desire to become more empowered in the

20   increasingly complex medical field, and how the

21   sites provide information for people seeking such

22   guidance.

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 1            The second article was all about how in

 2      some classrooms books may be a thing of the past.

 3      It talked about digital textbooks, and web-based

 4      curriculums embedded with multimedia and links to

 5      internet content.

 6            We simply cannot leave people with

 7      disabilities out of these kinds of internet

 8      experiences and opportunities.  Job applications

 9      for employment by Fortune 500 companies -- nearly

10      all of them now have applications on the web, not

11      as an option, but exclusively.

12            It took 10 years for wireless phones to

13      be hearing-aid compatible.  It took nearly 50

14      years for TV to become accessible to deaf and hard

15      of hearing people through closed captioning.  It's

16      still not accessible to blind people.  It took

17      nearly 100 years for the wire-line telephones to

18      be accessible to people with disabilities, with

19      hearing disabilities.

20            We just can't go on like this.  Right

21      now we have a booming aging population.  We need

22      laws.  Plain and simple, the market has shown that
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 1   it will not achieve the same result. We applaud

 2   Verizon, we applaud AT&T, we applaud the companies

 3   that have come to realize that there has to be a

 4   level playing field.

 5   H.R. 3101 has been talked about today.

 6   It will extend the existing requirements that

 7   apply to telecommunications to IP-based products

 8   and services. It will make sure that all new

 9   video programming devices are accessible, provide

10   pass- through of captioning and video description.

11   It will make sure that the internet video

12   programming carries captioning and video

13   description.

14   In addition to that, we also need to

15   make sure that our Federal government begins

16   serving as a model. Section 508 is not enforced

17   the way it needs to be enforced. It's not

18   implemented the way it needs to be implemented.

19   There is far too much internet content that simply

20   is not accessible.

21   Finally, the FCC can play a very

22   significant role in a lot of this. Some of it

1   does need to go to Congress, but the FCC has a lot

2   of leeway. It can create a clearinghouse of

3   accessible information and products and services.

4   Sometimes people just simply don't know what's out

5   there. It can do additional research on why

6   people aren't obtaining broadband, and what needs

7   to be done to reduce barriers.

8   It could set broadband speeds sufficient

9   to accommodate a dynamic media and clear

10   transmission of sign language. It could have

11   greater reporting obligations and better

12   compliance reviews, to make sure existing laws are

13   enforced. And it can actually make the changes in

14   the lifeline and link-up program, to extend it to

15   broadband.

16   Finally, I'm going to talk later about

17   interagency forums. I'm hoping that we do have an

18   opportunity to talk about that more, because I

19   have a lot of ideas on that for 508, NG911, and

20   the ADA.

21   And I tried to make it in time, but I

22   knew I wouldn't.

1   MS. LYLE: It was really close. Close

2   enough. Thank you, Karen.

3   Next up is Jane Mago, who is the

4   Executive Vice President and General Counsel of

5   the National Association of Broadcasters.

6   MS. MAGO: Thank you very much. It's

7   always interesting to be at this point in the

8   discussions here, because you can't see the papers

9   in front of me, but they've been written all over,

10   as everybody has already said many of the things

11   that I was going to say. So let me try to do this

12   impromptu, and if it comes off kind of disjointed,

13   forgive me.

14   But first of all, let me say thank you

15   for having me here today. It's nice to be back at

16   the FCC. It always feels like coming home. And I

17   really do appreciate that.

18   The key point that I think that I wanted

19   to make as the theme of what I had to say today

20   was about interoperability. And many of the

21   speakers have already focused on that.

22   Broadcasters are very interested -- and

 1   very invested -- in ensuring that the content that

 2   we directly produce, as well as the companies that

 3   we partner with, is accessible -- both on the air,

 4   online, and in the broadband pipeline. We're

 5   proud of the work that we do in-house, and we are

 6   proud of the efforts that we partake in to try to

 7   set the kinds of standards that will make that

 8   something that is possible. And we want the FCC

 9   to continue to recognize those public-private

10   partnerships that make that kind of action

11   possible -- and also to help to help to facilitate

12   those on a going-forward basis.

13   I'll just shout out one of our NAB

14   engineers, Graham Jones, who has been working with

15   the Society of Motion Picture and Television

16   Engineers that has been mentioned here several

17   times -- on the broadband standard -- and I'll

18   mess this up terribly -- but it's the 23B Ad Hoc

19   Working Group that's trying to do captioning and

20   subtitling standards for video content as it's

21   distributed over broadband. Having that content

22   be interoperable so that you don't lose the

1   captioning as it goes through the pipeline is

2   absolutely essential.

3   And Graham is also working on other SMPT

4   standards, and chairs two groups that are working

5   with image formatting and lip-sync issues. He,

6   along with another one of our engineers, Art

7   Allison, is also working on video description

8   issues, and trying to improve the audio services.

9   Art chairs a special group in the ATSC to make

10   sure that the standards are established. Among

11   the other revisions, the new version includes

12   changes to enable a complete VI audio track,

13   including original dialogue and music. And we

14   think that that's important to moving forward.

15   Let me also mention, you know, that we

16   also are engaged in trouble-shooting to try to

17   find out where the problems are. And I think that

18   that's something that should be a standard

19   practice throughout all of the industries that are

20   involved.

21   And finally, let me emphasize a point

22   that I think Karen just touched on just a moment

1   ago, dealing with education. And I think an

2   important role for the FCC here is to recognize

3   that education goes all around. It's for the

4   users, it's for the companies that are involved,

5   and it's for all of those that are creating the

6   content and working together to try to make sure

7   that that interoperability -- back to the basic

8   principle -- will be available.

9   Thank you.

10   MS. LYLE: Thank you, Jane. Next up is

11   Ken Salaets, the Director of Global Policy at the

12   Information Technology Industry Council. Thanks.

13   MR. SALAETS: Thank you, Elizabeth. I

14   like to say ITI represents companies with little

15   names, like AOL, HP, IBM and the like. And we

16   have a few with long names -- essentially, the IT

17   innovators. And it's a privilege to be here

18   before you today.

19   Let's touch on a couple of things here.

20   First of all, in terms of recommendations --

21   funding support mechanisms. One thing we've see

22   with Section 508 -- and we consider Section 508 to

1   be a smashing success. It's even getting better.

2   And I acknowledge David Capozzi and Terry Weaver

3   of GSA in the room, who we work with very closely.

4   It's really helped to synthesize the marketplace.

5   And by creating funding and support mechanisms for

6   consumers, you will enable them individually and

7   collectively to synthesize their market, and use

8   that market demand, that market pull, to drive a

9   process.

10   It's amazing what the dollar can do in

11   terms of motivating industry to come up with new

12   technologies and innovations, and push those out

13   rapidly into the marketplace. That's something I

14   think would be very helpful.

15   The second is harmonization. It's

16   critical for our industry that we have a set of

17   standards that we can address and respond to

18   globally. Because international standards really

19   drives our industry. It creates a platform that

20   enables us to compete, enables us to overcome

21   trade barriers and the like. And we see that

22   sometimes even at the domestic level, in addition

1   to the international level.

2   Section 508, with the Access Board and

3   the FCC, the collaboration has really been stepped

4   up, I understand, under the new Administration.

5   We strongly favor that and encourage that.

6   Because we have to respond to all of these

7   agencies and all of the requirements, whether they

8   be law, regulation or guidelines. So to the

9   extent that they're harmonized, that helps us go

10   out internationally -- whether it's talking in

11   China, in Beijing next week where I will be, or if

12   we're in Europe, talking to our friends there --

13   to encourage, again, a common platform. That

14   increases market-size incentives, lowest

15   cost-per-unit, increases return on investment for

16   R&D, and it creates competition that improves the

17   number of choices for consumers and lowers their

18   cost.

19   Third, leverage continued progress of

20   existing standards and technology efforts. I

21   think Larry already mentioned -- or perhaps it was

22   Gregg -- the SMPT caption working group -- excuse

1   me. I'm trying to grab my notes -- the DIGA3C

2   time text. There's an interoperability group for

3   AT and IT. Those are very constructive efforts

4   that are making significant progress, and usually

5   have multiple stakeholder involvement. To the

6   extent that the FCC, with a broadband policy, can

7   really highlight that and leverage those

8   activities, that really drives the marketplace

9   more quickly.

10   And then, fourth, support industry

11   best-practice initiatives. We've heard

12   best-practices mentioned a couple of times. ITI

13   is engaged in trying to drive that process. We

14   created a tool called the VPAT to basically

15   facilitate Section 508 procurement by Federal

16   agencies. We have now stepped up the game on the

17   VPAT by creating an XML tool that will really

18   assist market research efforts. We're now moving

19   forward with an effort -- and committed to the

20   Access Board -- that we will update that with a

21   508 refresh and really try to drive best-practice

22   so that the businesses that utilize that tool do

1   it in a consistent and effective manner for all

2   the people engaged.

3   Thank you.

4   MS. LYLE: Thanks very much, Ken. Next

5   up we have Matthew Knopf, who's the Vice President

6   of Business Development for PLYmedia.

7   MR. KNOPF: Hello. My name is Matt

8   Knopf from PLYmedia. And I'd like to thank the

9   FCC for inviting me here.

10   Prior to PLYmedia I worked for the

11   Federal government for a number of years on

12   Capitol Hill, and I've also worked in the wireless

13   and broadcasting industries.

14   PLYmedia provides captions and subtitles

15   for online video. We provide online video

16   captioning solutions to video content sites like

17   the Wall Street Journal, The Onion, as well as

18   enterprises like Intel and Sun Microsystems.

19   We are utilizing the internet and a

20   global supplier base to bring down the cost of

21   captioning. We can provide captioning, not only

22   for online video, but also the mobile platforms

1   such as the iPhone, as well as the ability to

2   caption live streaming video. Soon we'll be

3   launching a free web-based tool that allows

4   individuals to caption any videos from open

5   video-sharing sites, as well as an automated

6   speech and text captioning services.

7   For blind Americans wishing to access

8   foreign-language content, we will also offer an

9   audio narration service, as well as an automated

10   subtitle-to-speech service.

11   I'm not here today to advocate any

12   particular technology or company, but rather I am

13   here to provide policy-makers with a perspective

14   of a company that is out there trying to sell

15   online video captioning solutions.

16   Today the task of convincing

17   broadcasters to caption their online video is,

18   frankly, not an easy one. Many online video

19   broadcasters -- especially in the current economy

20   -- just do not consider captioning a high priority

21   right now. Common obstacles to implementation

22   include the following arguments: "Our customers

1   are not demanding the service," "We don't have the

2   budget for this." How is this going to make us

3   money? And, finally, "We'll wait until this

4   becomes mandatory."

5   The good news is, those broadcasters who

6   have started captioning their videos are

7   benefitting from doing so. Not only are they now

8   able to reach the 36 million deaf and hard of

9   hearing Americans, but they're also able to reach

10   the millions of hearing viewers who can't or won't

11   utilize video while at work. In addition, English

12   captions can easily and cost-effectively be

13   translated into multiple languages, making video

14   content available to audiences and advertisers

15   around the world.

16   Further, a recent research report

17   indicates that providing video transcripts -- an

18   output of captioning -- increases search rankings.

19   Our own internal research has indicated that

20   implementing captions increases viewing times, and

21   thus customer satisfaction. In one study of a

22   major publisher using our service we found that,

 1   on average, online videos with captions had 38

 2   percent longer viewing times, versus those videos

 3   that did not have captions. In addition, where

 4   captions appeared, 80 percent more people watched

 5   the entire video to completion.

 6   Given that increased engagement leads to

 7   increased advertising revenues, we believe that

 8   online video caption is not only the right thing

 9   to do, it's also good business. Whereas once the

10   FCC's E911 mandates for wireless handsets may have

11   been considered by some as an industry burden, now

12   mobile-location-based services are an important

13   driver of wireless data revenue. Similarly, we

14   believe that online video captions are win-win for

15   both of the hard of hearing and broadcasters.

16   For the widespread adoption of online

17   video captioning to occur in the short term, we

18   believe that a proactive government effort is

19   necessary. We believe the FCC should take an

20   active leadership role in educating the

21   broadcasting industry about the aforementioned

22   benefits of captioning online video, as well as

1   the availability of technical solutions. We

2   believe that by partnering with the broadcasting

3   industry, the FCC can establish a series of

4   guidelines, quantifiable metrics, and reasonable

5   timelines for implementing accessibility

6   solutions.

7   Should these efforts prove unsuccessful

8   in the near term, we believe that legislation such

9   as the pending 21st Century Communications and

10   Video Accessibility Act may be required.

11   Finally, given the emergency of 4G

12   wireless networks, smart phones, and the 50

13   percent year-over-year increase in mobile video

14   consumption, we recommend that the FCC take the

15   mobile platform into consideration when addressing

16   digital accessibility.

17   Thank you.

18   MS. LYLE: Thank you, Matthew.

19   MR. KNOPF: Oh! One second!

20   (Laughter)

21   MS. LYLE: Awesome. Next we have David

22   Capozzi, who's the Executive Director of the U.S.

 1   Access Board.

 2   MR. CAPOZZI: I'll take his second.

 3   MR. KNOPF: I yield you my time.

 4   MR. CAPOZZI: It wasn't long ago that we

 5   were talking about the "digital divide." Let's

 6   make sure that in the future -- the not-to-distant

 7   future -- we're not talking about "broadband

 8   barriers."

 9   Broadband provides the opportunity to

10   access more richly interactive content over the

11   internet. And with that increased bandwidth will

12   come the rush to push more content into a bigger

13   pipeline. And without vigilance, more and more of

14   that content will be inaccessible to people with

15   disabilities in that rush to push content.

16   Let me give you three examples that

17   we're currently very worried about.

18   First is electronic health records. We

19   already see the push from the Administration and

20   from the industry to access health records

21   remotely -- both for doctors and for patients.

22   And we need to make sure that, in that rush to

1   push out content, that that content isn't left

2   behind for people with disabilities.

3   Secondly -- and we've heard this already

4   -- online electronic learning. I have four

5   children that are of school age, three of them in

6   high school, one in college. And I can tell you

7   that the vast majority of their learning is

8   through electronic means. More and more of that

9   is going to happen. Students with disabilities --

10   specifically students with vision impairments,

11   students with hearing impairments will be left

12   behind, without access to that content. Finally,

13   the third example -- safety and security. We've

14   heard about 911, emergency preparedness, emergency

15   messages for natural disasters and terrorist

16   activities. We need to make sure that the

17   population is aware of those emergency messages in

18   an accessible fashion right out of the box.

19   Two recommendations for collaboration

20   that are challenges for the government.

21   First, we need to clarify the coverage

22   of internet access under the ADA and other laws,

1   especially in light of the recent signing by the

2   United States of the U.N. Convention on the Rights

3   of People with Disabilities.

4   Secondly, we need to ensure that there's

5   greater inter- government collaboration on all of

6   these issues that we've been talking about -- both

7   Federal-to-Federal, Federal-to- State and U.S. to

8   the international community. We've heard this

9   from a few of our speakers already, but we need to

10   make sure that we're not posing conflicts with

11   what we do here and what others are doing

12   internationally, and vice versa.

13   We have huge challenges ahead of us, and

14   we need to make sure that broadband barriers

15   aren't created right now.

16   Thank you.

17   MS. LYLE: Thank you very much, David.

18   Next is Jim Tobias, President of Inclusive

19   Technologies.

20   MR. TOBIAS: Thank you. I guess I'd

21   like to speak in favor of a policy viewpoint that

22   had strong legislation, but implemented very

         1   flexibly and in a very contingent manner. And I

         2   think is necessary for reasons that people have

         3   pointed to already.

         4   We've got an extremely long and

         5   complicated value chain in the broadband realm,

         6   that Erik Bridges noted before. You know, he's

         7   got his keyboard and display, he's got is

         8   hardware, operating system, browser, internet

         9   service provider, remote server. And then the

        10   content and software apps get on that server by an

        11   extended chain on the other end of that server.

        12   So, you know, in the worst-case

        13   scenario, you've got every link in that chain

        14   that's under constant technological change and

        15   upgrading, you know. So, let's say, once a month,

        16   you know, some link on that chain is going to

        17   fail. And it fails for people without

        18   disabilities. And we have that 14-year-old

        19   next-door neighbor who can help us, you know,

        20   figure out how to do that.

        21   But when you insert assistive technology

        22   into that value chain, it all of a sudden becomes

1   extremely complicated, and that 14-year-old

2   neighbor is no longer an expert in, you know, how

3   do I configure a screen-reader.

4   So, I think the mode that the Commission

5   and all of the Federal or policy actors should be

6   in is kind of like not command-and-control, not

7   trying to dominate by standards or other

8   regulatory action, but kind of like park rangers

9   to, you know, keep a close eye on the ecosystem in

10   the park, and understand the interaction between

11   the products, and why the visitors to the park are

12   there in the first place, you know. And are the

13   trails that people like being maintained properly?

14   And, if not, how do you intervene effectively, in

15   a way that, you know, keeps the visiting up, and

16   keeps the capital cost down.

17   So it's more of a husbandry approach

18   than a, you know, an engineering, purely

19   engineering, purely technological approach.

20   Connected to that is, you know, if we're

21   not going to be intervening in a legalistic

22   manner, we need to do much more than we're doing

1   with consumer awareness. If there is a lot of

2   accessibility out there that's being

3   underutilized, how do we get consumers aware of

4   the choices that they can make that will optimize

5   it for their needs? You know, the programs that

6   Deborah Buck was talking about, those State-

7   based, very much in the trenches, very much

8   connected both to technology and to end-users,

9   those programs could be 10 times bigger than they

10   currently are, they still wouldn't be meeting all

11   of the need of the consumers out there. And I

12   think we can grow that consumer awareness in that

13   direction.

14   We can also grow it towards industry in

15   the same way that's been talked about, of having

16   intelligent tools for content development that

17   make it easy to make accessible content, that make

18   it easy to test the web-based applications for

19   accessibility.

20   And the Commission might want to take a

21   view to grow its own early-warning capability, so

22   that, you know, as new technologies that are still

1   three to five years out from the market, we need

2   to understand what the opportunities and

3   jeopardies are for something like near field

4   communication and other technologies before they

5   get hardened for implementation. And I think the

6   Commission can play a role there.

7   Thank you.

8   MS. LYLE: Thanks very much, Jim. Next

9   is Alan Brightman, who is Senior Policy Director

10   at Yahoo!

11   MR. BRIGHTMAN: Thank you, Elizabeth.

12   I'm very happy -- and, quite frankly, now a little

13   humbled by listening to all the comments before me

14   -- to be here.

15   My name is Alan Brightman, and I've been

16   at Yahoo! now for the past three years, serving as

17   the Senior Policy Director for Accessibility.

18   Also, by way of context, I might mention

19   that earlier in my career I was at Apple for 13

20   years, beginning in 1984, where I created what

21   came to be known as the Worldwide Disabilities

22   Solutions Group with some other members around

1   this table.

2   In those days, in the computer industry,

3   we viewed what we were doing as kind of building

4   electronic curb-cuts into a box. These days, in

5   the internet industry, we view what we're doing as

6   building those same kinds of curb-cuts into the

7   ether, into the cloud. In both cases, my

8   commitment -- but, more importantly, the

9   commitment of both companies -- to increasing the

10   quality of life for kids and adults with

11   disabilities was, and remains, unassailable.

12   Have we done everything perfectly? Of

13   course not. Do individuals with disabilities still

14   struggle with using the internet? Certainly.

15   While I'm very proud of Yahoo!'s

16   progress in the accessibility area, I'm also very

17   much aware that we, together with out colleagues

18   and, quite frankly, our competitors, have much

19   more work to do. Accessibility has always been a

20   moving target.

21   If I may, I'd like to just make a couple

22   of comments about accessibility -- comments that

1   perhaps aren't as frequently acknowledged as

2   others. And while these are not specifically

3   recommendations, per se, they're, rather, insights

4   from the corporate community that I hope will

5   prove useful in the final development of the

6   Broadband Plan.

7   First, I could recite story after story

8   about individuals with disabilities who call or

9   write us to let us know how much they value the

10   internet, how central it has become in their lives

11   -- and, in fact, how their online experience has

12   fundamentally changed their experiences being

13   disabled. Their phrase, not mine.

14   But this could only happen, of course,

15   if they can access the internet. So, while

16   accessibility at Yahoo! is very much about

17   engineering and design, it's even more about the

18   half a billion people who come to Yahoo! every

19   month. Frankly, I don't know how many of these

20   500 million people are kids or adults with

21   disabilities. I don't know, because I don't ask.

22   And in most cases, there's no reason for any one

 1   of them to self-disclose. They don't need to tell

 2   us they have a disability in order to use our

 3   products and services. They just need to use them

 4   their way.

 5   And the point is: we're a business. And

 6   not to sound uncaring or crass, to us, disabled

 7   individuals are first and foremost customers --

 8   customers, contrary to popular misconception, with

 9   money to spend. Our challenge, then, is to make

10   sure that they can get into our store, and that

11   they can reach what's on the tallest shelves and

12   what's on the price tag. Otherwise, as far as

13   disabled consumers are concerned, we'd be in the

14   sales-prevention business.

15   Accessibility -- final point -- in

16   mainstream companies has almost never, is almost

17   never the highest priority. I don't care whether

18   your company is selling computers or internet

19   services or toothpaste, it will never be the first

20   concern of product managers or product marketers.

21   This is truer at Yahoo! too. Security is a high

22   priority. Privacy is a high priority. Speed and

 1   performance is a high priority. And now,

 2   suddenly, accessibility is becoming more and more

 3   of a priority because our engineers and designers

 4   have come to realize what no doubt is obvious to

 5   everyone in this room: products and service

 6   designed with accessibility in mind are, in most

 7   cases, simply more usable and convenient for

 8   everybody.

 9   And if that weren't enough motivation,

10   accessibility has become more of a priority at

11   Yahoo! because our chief product officer has

12   required it to be so. And for most of our

13   engineers and designers, that's all the motivation

14   they need. That and the simple understanding that

15   it's simply the right and smart thing to do.

16   Thank you.

17   MS. LYLE: Thank you very much, Alan.

18   Next up is Helena Mitchell, who is the Executive

19   Director and Principal Investigator of Wireless

20   RERC, Georgia Tech.

21   MS. MITCHELL: Hi. The Wireless RERC is

22   funded by NIDRR, which is part of the U.S.

1   Department of Education. And our focus is on

2   promoting equitable access, and also encouraging

3   universal design principles in the creation and

4   future generations of wireless and broadband

5   technologies.

6   Today I'm going to focus on our user

7   needs data, and some of the findings from some of

8   our testing that we've been doing to help in the

9   creation of the new National Broadband Plan and

10   accessibility.

11   I'm going to quickly cover -- probably

12   quicker than I thought because of where we are in

13   the roundup here -- some of our recommendations

14   that haven't already been covered by my

15   colleagues. And the full text of all of our

16   comments will be submitted for public record later

17   on.

18   Number one -- well, number one is now

19   number two, okay -- the Plan should stress that

20   when developing broadband equipment, software and

21   content, front-end consultation testing with users

22   with disabilities is critical to the improvement

     1   of the end product by leading to results that

     2   incorporate universal design elements -- a win for

     3   manufacturers as well as a win for all consumers.

     4   Number two -- the Plan should address

     5   development and testing of broadband devices. We

     6   collaborate with industry partners such as

     7   Research in Motion, CTIA, ATI, AT&T and Microsoft

     8   to promote both accessible and affordable

     9   solutions for people with disabilities.

    10   Number three -- the Plan should note

    11   that broadband applications encompassing

    12   text-based communications and data access do

    13   benefit people with disabilities. The Wireless

    14   Survey of User Needs Data, which includes about

    15   1,600 people, have noted that there's a relevant

    16   increase in the percentage of respondents who

    17   identify text-based communication which includes,

    18   of course, IM, text-messaging and e-mail, and

    19   internet access as among the most important

    20   broadband uses and projects for future use.

    21   We recommend -- number four -- we

    22   recommend that broadband applications regarding

1   public safety and accessible emergency alerts

2   should also be part of the Plan. An important

3   strategy to the development of inclusive and

4   accessible emergency communications system is the

5   design and implementation of appropriate user

6   interfaces. To this end, we conducted over 12

7   field trials with over 100 participants, looking

8   at the parameters of the emergency alert system

9   and CMAS. The use of custom client software

10   allowed us to test accessibility features for

11   blind, low- vision, deaf and hard of hearing

12   participants. We looked text-to-speech of alert

13   text, we looked at special audio tones to alert

14   the user, and custom vibrations to differentiate

15   from the regular alert messages.

16   The Wireless RERC, number five,

17   recommends that within the plan, equipment

18   manufacturers incorporate emergency alerting into

19   mobile wireless devices handsets, also be

20   encouraged to look at issues such as volume and

21   vibration as accessible design features for all of

22   us. When this is not possible, at a minimum we

1   recommend that industry take a look at add-on

2   features.

3   Again, all of our comments can be found

4   in our filings for the public notice, and also

5   (inaudible).

6   MS. LYLE: Great. Thank you very much,

7   Helena. Next up is Dane Snowden, who's the Vice

8   President of External Affairs at CTIA.

9   MR. SNOWDEN: Thank you. Commissioner

10   Copps, I want to thank you for your kind words and

11   your good words, as always. And also the Chairman

12   Jankowski And his leadership, and also Executive

13   Director Levin for what you're doing on the

14   Broadband Plan.

15   Without a doubt, broadband will not only

16   democratize information as we all know and

17   believe, but it will also democratize

18   communication. And based on the information we've

19   seen from the RERC, about 80 percent of

20   individuals own or access wireless who have a

21   disability, we know quite clearly that this is

22   going to be the game-changer for many consumers,

1   not just consumers with disabilities, but all

2   consumers. Because everyone wants to be mobile.

3   We know it's going to help with

4   education, we know it's going to help with health

5   care, we know it's going to help with public

6   safety, and we know it's going to help with

7   employment, as well. Many more -- many consumers

8   are using smart devices now as their main

9   communication device to access the internet. And

10   we want to make sure that all consumers -- no

11   matter if you're in rural America, if you have a

12   disability, or you're in urban America -- have

13   access to these services.

14   I want to put out three recommendations

15   that we have for all consumers and for the FCC.

16   The first kind of shadows our comments

17   that we already made, but let me highlight a

18   couple of key points.

19   More spectrum, streamlining (inaudible)

20   process, and defining broadband in the wireless

21   process, the wireless process plan, are

22   instrumental. In addition, allowing for network

1   management. We heard a lot about video

2   description, text relay, sign language through

3   mobile devices. You need to be able to manage

4   your networks to control what's going on so that

5   everyone who wants to have access can have access.

6   The second recommendation is that we

7   want to see -- we want the FCC to set the goal but

8   be flexible in how that goal is achieved. We've

9   seen already, through history, how the readily

10   achievable standards have allowed built-in

11   solutions, they've allowed assistive technology,

12   and they've allowed software applications to have

13   more services being brought to more consumers --

14   which, of course, applies with the openness

15   principles that the FCC has outlined.

16   And third -- and this will be no

17   surprise to my good friend over here, Mary Beth

18   Richards -- the FCC needs to get outside of

19   Washington, D.C. This is critical. I think it is

20   imperative that we hear from more people. It's

21   good for the FCC, it's good for the advocates,

22   it's good for the industry to prioritize and

1   identify special issues and concerns that may have

2   come up. And I couldn't agree more with Jane Mago

3   and my friend Karen Peltz Strauss on how they've

4   characterized this. We need to have more

5   education in terms of what's available today for

6   consumers.

7   We also need to figure out a way to

8   identify problems through the complaint process.

9   You can't make public policy without information.

10   And so successfully having enforcement to fix

11   problems when they exist or persist is key. But

12   you have to have information.

13   And, finally, I encourage everyone to

14   collaborate -- the industry and everyone else --

15   as we go forward. And check out the Blackberry

16   booth. You'll see a lot of the activity that's

17   going on in our industry right now.

18   Thank you.

19   MS. LYLE: Thank you very much, Dave.

20   Next -- and last at the roundtable, but not really

21   -- is Paul Schroeder. And he is Director of

22   Program and Policy at the American Foundation for

 1   the Blind. Thanks, Paul.

 2   MR. SCHROEDER: Thanks, Elizabeth. I

 3   wondered what short straw I drew to get 3:45 in

 4   the afternoon.

 5   I was struck by -- Paul Schroeder, with

 6   the American Foundation for the Blind -- I was

 7   struck by the comments, not so much today, but the

 8   comments in the docket that talk about market

 9   forces, flexibility, voluntary action -- and I

10   really do wish those things worked, because I do

11   acknowledge the power of all of those concepts.

12   But I think all of us who have a

13   physical, a sensory, a communication or a

14   cognitive disability recognize full well that,

15   while access does occur, it happens haphazardly.

16   Market forces alone simply won't do the trick.

17   There's too much riding on access to broadband to

18   leave to chance the access for people with

19   disabilities.

20   Government has an important role to

21   play, and it seems to me that sorting out that

22   role and, in fact, making clear that there is an

1   obligation for government to set the direction and

2   figure out how to use its authority in the most

3   appropriate way is worth sorting out, and it's

4   worth our time today.

5   Innovation is key. Innovation has

6   occurred, and has favored access for people with

7   disabilities. But it has to be built on an

8   accessible foundation.

9   I feel like I've been at this effort so

10   long that I've come up with an acronym that sort

11   of spells out the way I feel, and it's AAIK --

12   Accessibility, Affordability, Investment and

13   Knowledge. Okay, I played a little bit, but --

14   AAIK, play with it.

15   So, accessibility -- clear direction,

16   mandates. I believe in mandates. I believe that

17   it's really the only way to ensure that that

18   accessibility foundation happens all along the

19   chain, from consumer equipment to websites to the

20   services delivered via those sites. H.R. 3101's

21   been mentioned many times. I think it sets a good

22   foundation. And certainly, as one who supports

1   that legislation, we're willing to work with

2   others on improving it.

3   Web accessibility should absolutely be

4   required. I understand we're in a flexible and

5   very open age. Nonetheless, it has to be there.

6   Government leadership has been talked

7   about by many, and I do believe the government has

8   a very important role to play in setting

9   leadership on how to provide accessible services

10   and, in fact, also investing in compliance. Very

11   disappointed to hear some of the statistics that

12   my colleague Erik talked about earlier.

13   Affordability -- universal service

14   should absolutely support broadband -- at least

15   for people with disabilities. I might argue with

16   broadband, it ought to be supported just the way

17   telephone service has been. But certainly for

18   people with disabilities, I think the argument is

19   quite clear.

20   Government support for distribution of

21   accessible equipment and assistive technology. We

22   don't talk enough about that, but we ought to be

1   focusing on that, because people with disabilities

2   shouldn't be mortgaging their lives away just to

3   be able to have access to something like I've got

4   here, a braille display that's $6,000, but is key

5   to my life and my accessibility.

6   Investment -- key, also. Why not talk

7   about grants and R&D tax credits also to stimulate

8   accessibility efforts on the part of industry.

9   Last -- knowledge and outreach. We

10   certainly hope that the FCC will be assessing

11   statutory and regulatory barriers to broadband

12   access for people with disabilities. I think

13   others have talked about the odd statutory

14   provisions that we live under. And data

15   collection also ought to include uptake by people

16   with disabilities and the barriers to people with

17   disabilities.

18   Thanks.

19   MS. LYLE: Thank you very much, Paul.

20   I'm going to ask our government panelists -- and,

21   in particular, Commissioner Copps -- if you have

22   any questions you'd like to ask the panelists

       1   before we go through a response round.

       2   COMMISSIONER COPPS: Well, I'm anxious

       3   to hear some discussion -- and a couple of people

       4   have brought it up already -- of interagency

       5   coordination. That's one thing that interests me.

       6   And I think the other one, there's been

       7   a lot of emphasis on innovation and technology,

       8   and I'd like to hear discussion of that vis-a-vis

       9   the need for a lot more in the way of basic

      10   research and development, what's available now and

      11   how does this fit into disabilities access.

      12   And I'd like to start off with the

      13   interagency cooperation or lack thereof. We seem

      14   to be getting back into a period now when

      15   interagency coordination is a little more smiled

      16   upon than it has been in recent years. But we've

      17   got to give that some direction and breathe some

      18   life and inspiration and details into that.

      19   So I'd be anxious to hear how folks

      20   around the table think that we might go about the

      21   job of putting together an effective interagency

      22   group that could address this, and what its

1   purview might be.

2   MS. LYLE: Okay, Claude, I think, was

3   first. So -- Claude?

4   MR. STOUT: Yes. Okay, this is Claude

5   Stout. Let me give you an example of where we

6   could leverage a more active interagency

7   relationship, in terms of next generation 911.

8   If you talk about improving access to 911 centers, the

9   Commission can go far if they assist in the

10   networking, the relay services, making sure they do

11   their part, and also for the Department of Justice to

12   do their part in helping the FCC fulfill their

13   responsibilities in making sure that 911 center are

14   indeed accessible to those of us with disabilities.

15   You could also work with the Department of

16   Transportation who, indeed, has just completed a pilot

17   project for next generation 911. And I see the three

18   entities I've mentioned -- FCC, DoJ and DoT -- who

19   could work really in a nice triumvirate to take back

20   to Congress and make note of these issue and planning

21   and recommendations that they could be given, all as a

22   group, on this issue.

1   MS. LYLE: I think Karen I saw next.

2   MS. PELTZ STRAUSS: Yes, I agree with

3   Claude. I think there's a tremendous opportunity

4   to have interagency efforts with NG911. In

5   addition, I see two other areas where it's

6   critical. One is Section 508, which we've touched

7   upon. Yes, there is no question that there's been

8   significant progress in the provision of

9   accessible electronic and information technology

10   across the Federal government -- but it is very

11   inconsistent. And having some consistency, having

12   the FCC provide input into efforts to achieve such

13   consistency would be very, very helpful.

14   The third area is the Americans with

15   Disabilities Act, and compliance with that Act.

16   Not long ago the Department of Justice under the

17   prior Administration issued new proposals to

18   update its regulations, and they were woefully

19   behind the times. They only spoke of TTY access.

20   They just did not even recognize that there were

21   other kinds of advanced communication access.

22   So, in terms of making sure that the

1   provisions in the ADA that address

2   telecommunications access -- and there are various

3   provisions in the Act, in Title II, affecting

4   public and State local governments, as well as

5   private entities, as well as websites provided by,

6   again, private and public entities -- having

7   coordination with the FCC, and making sure that as

8   the Department of Justice updates its rules --

9   because it's still in the process of doing so --

10   making sure that those rules can conform to the

11   national Broadband Plan, that they mesh, is going

12   to be incredibly important as we move forward.

13   MS. LYLE: Thanks very much. Larry?

14   MR. GOLDBERG: I'd like to address the

15   Commissioner's question about innovation, because

16   obviously there's no one here in this room that

17   would oppose innovation -- or encourage anything

18   that would hamper innovation.

19   I think in the world of development of

20   accessible technology, I have seen some of the

21   most innovative people spring out of this world.

22   Gregg Vanderheiden's shop, and Benetech -- Jim

1   Fruchterman, a certified genius by the MacArthur

2   Foundation.

3   Making a DVD menu accessible to a blind

4   person -- a phenomenal innovation. And making an

5   iPhone speak from voice-over -- these innovations

6   are tremendous.

7   It's implementation where we're lagging.

8   Very few of these technologies have actually

9   gotten out there into the marketplace pervasively.

10   So the innovation really is in getting

11   it out into systems and into products. And with

12   that, I think we'll have accomplished what

13   innovation is intended for -- not just a prize for

14   one brilliant piece of software, but the embedding

15   of that software in common devices everywhere.

16   MS. LYLE: Thank you. Deborah?

17   MS. BUCK: Deborah Buck. I want to add

18   on to Karen's statement about 508, and strongly

19   urge you that if an effort moves forward to look

20   at 508 and implementation at the Federal level,

21   that there be an effort to engage State

22   governments.

 1   While States are not required to conform

 2   with 508, at least half of the States have

 3   voluntary adopted State statutes to do so.

 4   However, by engaging them, it will emphasize the

 5   importance of this and really ensure that those

 6   that have not come on board will understand the

 7   need to do so.

 8   Secondly -- following up with Larry's

 9   comment on innovation -- the way to target that

10   demand or generate that demand is to get the ideas

11   and those prototypes out there to consumers so

12   that they can try them and see and provide

13   feedback, not only to the developers, but then

14   emphasize that -- and give positive feedback to

15   the manufacturers that there is interest, there is

16   an interest to buy these, there's the need for

17   them, et cetera.

18   MS. LYLE: Do you mean getting them out

19   to the consumer through the State programs? Is

20   that -- or --

21   MS. BUCK: You know, the State AT

22   programs are one venue. As Jim said, we are very

1   a small funded program and we'd love to see more

2   resources.

3   There are many, many organizations that

4   touch people with disabilities. The value of the

5   AT programs is that they are required to provide

6   services to people of all types of disabilities,

7   of all ages and in all environments -- from

8   education, employment, community living. So it's

9   a venue where, if you see a product that may have

10   been manufactured or developed targeting one

11   disability type, people within that venue can say,

12   "Oh, yeah, but it's got functions that could

13   benefit this person coming in through the door."

14   So you're not funneling it, you're not silo-ing

15   those devices.

16   MS. LYLE: Helena had her hand up, too.

17   MS. MITCHELL: The government has a lot

18   of coordinating councils, but I think if you're

19   going to start looking at broadband accessibility,

20   you might want to narrow that. And you might want

21   to, of course, have the FCC, NTIA, Department of

22   Agriculture -- because they deal with rural

1   broadband issues.

2   But also NIDRR -- NIDRR never seems to

3   be at the table when the discussions of

4   accessibility come up. And they're obviously a

5   key player. So bringing them into the fold to

6   help address questions would be really good.

7   And then, of course, you have all these

8   task forces, but the Commission staff is so busy

9   that oftentimes those don't actually get

10   implemented, which is what a lot of people are

11   saying.

12   So maybe if you start out with a tighter

13   group and then start rolling it out, that might

14   help, too.

15   COMMISSIONER COPPS: Does what Bob

16   Atkinson was talking about, in terms of would you

17   call it a "government focus center," it kind of

18   brings both of these things together, as I

19   understand -- the emphasis on research, which

20   maybe lacking, and also as a vehicle for the

21   interagency cooperation?

22   MS. MITCHELL: Mm-hmm.

1   MR. ATKINSON: Yes, Commissioner, I

2   think that would be a place to do that. Part of

3   the problem in a lot of innovation areas is that

4   it's partly an issue of money, but it's an issue

5   of a coordination challenge. And here -- I know

6   what Larry is saying, but I also think that better

7   innovation gets more broadly adopted because it's

8   just easier to do, and it's cheap. There was a

9   Business Week article, I guess last issue, a

10   couple issues ago, that talked about some of the

11   technologies that were developed by some companies

12   like -- I think Yahoo! may have been listed, but I

13   know Google was, and some others, and Apple --

14   where they're actually now using them more broadly

15   because they're benefits to everybody.

16   And so I think that's the kind of

17   technology innovation that we want to be pushing.

18   So I think the idea of some kind of

19   focused program, focus center program, would

20   enable that to happen.

21   MS. LYLE: Anybody else? David, go

22   ahead.

 1   MR. CAPOZZI: Thank you. David Capozzi,

 2   with the Access Board.

 3   Getting to the point of collaboration --

 4   the Access Board is in the process of updating its

 5   Section 508 standards and its Telecommunications

 6   Act accessibility guidelines. And I'd say half of

 7   the people around this table have been involved in

 8   one of our three or more of our three advisory

 9   committees, going back to the Telecom Advisory

10   Committee, our Section 508 Advisory Committee, and

11   our last advisory committee, called TEITAC --

12   Telecommunications and Electronic Information

13   Technology Advisory Committee. And it was a

14   41-member organization, and we collaborated with

15   the State level, Federal level with Federal

16   agencies, private sector and international. We

17   had four international representatives on the

18   advisory committee.

19   My plea is, specifically to the FCC, to

20   closely collaborate with our agency as we update

21   our 508 standards and our telecom guidelines, and

22   to work closely with the FCC staff on that. We're

 1   at the stage where we're about to issue a Draft

 2   Proposed Rule. We're aiming for the fall of this

 3   year -- fall goes all the way to December 21st.

 4   (Laughter)

 5   SPEAKER: And "aiming" means what?

 6   MR. CAPOZZI: "Aiming" means we're

 7   shooting for it. And we really, specifically,

 8   would like FCC feedback and input on our draft.

 9   MS. LYLE: Ken?

10   MR. SALAETS: If I may just add the

11   notion of collaboration internationally, which was

12   highlighted by a few folks.

13   It's always a challenge for industry to

14   go into these different markets where we

15   essentially try to build one technology. I mean,

16   I like to say whether you're blind in Brussels,

17   Brisbane or the Bronx, the solutions -- the

18   technology solutions -- are very similar, and

19   there's a lot of advantage to having that dialogue

20   internationally.

21   To the extent that the FCC obviously is

22   addressing and interested in this issue, if you

1   have outreach efforts with other governments --

2   similar agencies within other governments -- that

3   really helps industry. Because we are having

4   those conversations already. And to the extent

5   that the U.S. government is also at the table and

6   promoting that through the various channels and

7   programs that are already being run by the

8   Administration and some of the agencies -- NIST,

9   for example, and on down the line, Access Board,

10   et cetera -- that's extremely helpful for us.

11   Because they start to hear the message

12   multiple times. And a lot of times the products

13   being used in those markets are developed by U.S.

14   manufacturers. So there's a distinct advantage in

15   driving that process and having that dialogue,

16   whether you're talking to somebody in China,

17   whether it's in Europe, whether it's in South

18   Africa -- whatever the case may be.

19   COMMISSIONER COPPS: Is anyone driving

20   that process now?

21   MR. SALAETS: There are -- there's a

22   kind of an alphabet soup of activity that takes

1   place, primarily, for example, between Europe and

2   the U.S. There's the APEC activity in Asia.

3   There are a number of organizations and

4   collaborations through the U.N. -- which will

5   accelerate, probably -- and in other places where

6   those dialogues are taking place. Just, to the

7   best of my knowledge -- and I could be wrong -- I

8   don't recall seeing the FCC involved in those

9   dialogues, and I think that would be extremely

10   useful for us.

11   MS. LYLE: I think, actually, Gregg

12   Vanderheiden, and then we'll take you (inaudible).

13   MR. VANDERHEIDEN: Yes, we had spoken

14   earlier about a national public inclusive

15   infrastructure, and I think this is a classic

16   example of something that not only fosters but

17   requires interagency collaboration. And not just

18   between the agencies in the government, which is

19   true, but also with Federal, State, local and

20   international to really do this.

21   It requires regulation, research,

22   implementation and innovation -- all aspects --

1   which brings different agencies to bear. For

2   example, it doesn't work without -- as we talked

3   about earlier -- the ADA being extended to the

4   web, and a recognition that the content -- I mean,

5   we can't do it all with tools on the other end.

6   It's got to be the content, too.

7   There's a whole area around the

8   copyright. And we won't talk more about it here.

9   But there is actually -- violates the law to make

10   some of this stuff accessible to many of the

11   people who need it. Some types of material, to

12   some populations, are covered by CHAPI, but the

13   rest of the material and the rest of the people

14   are not covered, and interoperability.

15   So there are some areas where regulation

16   comes in. Then we have research funding. We've

17   got NSF, NIDRR and various places to be carrying

18   out research funding to help seed the innovation.

19   We have implementation, so we have

20   Commerce involved. And through Commerce, bringing

21   the private sector involved into this so that it's

22   not just all on the shoulders of the government.

1   We have innovation. And one of the main

2   focuses we've talked about is creating the tools

3   and stuff to unlock the creativity across the

4   United States so that, again, it really enables us

5   as a country to begin working on this -- not just

6   the big programs, but big, small, all sizes.

7   And so I think this is a really great

8   example of something that needs to have exactly

9   the kind of thing you're talking about.

10   MS. LYLE: Thank you, Gregg. I

11   understand that Randy Pope wanted to say

12   something, his response time. And then we'll go

13   Patrick and then Kathy Brown.

14   MR. POPE: Yes, I do. Hello everybody.

15   I am really, really appreciative to see everybody

16   here, and to see that we're discussing

17   accessibility issues and working together. We

18   have seen things happening. We see progress

19   occurring.

20 One problem, however, and that is that the deaf-blind

21 community is being left out of the process. We see

22 things going on. We have new technologies being

1   created but, yet again, the deaf-blind cannot access

2   them.

3   I think this, again, is just another example of

4   individuals who are fully deaf and fully blind not

5   being able to access things such as captioning -- just

6   television, in general -- emergency service

7   information and things of that nature.

8   Now, there are many different ways that deaf-blind

9   people are not accessing what should be available to

10 them. There are limitations. Many companies, when

11 trying to design accessible equipment, are not

12 thinking about the needs of the deaf-blind community

13 and what those may be.

14 We have older technologies that allow -- that did

15 allow deaf-blind people access that are no longer

16 being manufactured. Many telecom companies are not

17 wanting to spend the money on the research and

18 development necessary for new devices. And so we

19 would ask the FCC first to address the needs of

20 the deaf-blind. Please keep us in mind. Keep us in

21 the loop when things go on.

22 Understand that we are a small population of the

 1 disability community, and so it's very easy to forget

 2 us. But that is the very reason that I thank you for

 3 inviting me here today.

 4 We also hope that a system will be developed that will

 5 encourage companies to -- encourage innovation and

 6 research in new telecommunications technologies and

 7 issues. The technology we have available to us now

 8 generally gets started in the government, gets its

 9 foot in the door -- the government sponsors the

10 research and makes it happen.

11 So we do agree with many of the speakers up until this

12 point on the issues that have been discussed. We ask

13 that you keep in mind our community and the fact that

14 we have the most difficult access issues, I believe,

15 because we are such a diverse community.

16 So thank you again for your time.

17   MS. LYLE: Thank you very much, Randy.

18   And next is Patrick Halley.

19   MR. HALLEY: I'm Patrick Halley, with

20   NENA. Just two quick things.

21   One, I want to give the Commission

22   credit for interagency coordination recently

1 between their Public Safety Bureau, the DHS Office

2 of Emergency Communications, the DoT folks, who've

3 done a lot on Next Generation 911. So I do think

4 there is improved interagency communication there.

5   There's always room for improvement. I

6 do encourage you, as you work on the National

7 Broadband Plan and the DHS starts looking at their

8 Version 2 of the National Emergency Communications

9 Plan, hopefully those are saying the same things.

10 And I think they can and should.

11   Secondly is interagency communications

12 with Federal agencies and State. Because while

13 the Commission has authority to regulate providers

14 -- whether wireless or wire-line -- in terms of

15 911 and emergency communications requirements,

16 particularly when it comes to 911, you can

17 regulate the originating service provider, but the

18 underlying -- as I said earlier -- the 911 system,

19 which always has been a State regulatory issue,

20 has to be capable of receiving what you're asking,

21 at a Federal level, the communications provider to

22 send.

1   And think going to Dale's point about

2   the bully pulpit, the Commission can do a lot at a

3   national level, even if it's not a direct

4   regulatory issue, to bring stakeholder together

5   and working with other agencies to say this is a

6   model for what the Next Gen 911 system can be so

7   that the States that are out there implementing

8   can actually do this in an organized fashion.

9   And it's particularly important, because

10   as we move to Next Generation 911 -- I want to

11   emphasize -- this is not a band-aid to the current

12   E-911 system. This is not improving location for

13   wireless calls. This is a fundamentally new

14   IP-based 911 system. And so it's going to be an

15   open, competitive IP-based 911 system.

16   You're not going to have three large

17   telephone companies that are running the whole

18   show. It's going to be a much different

19   environment. And if it's going to be in a

20   standardized, coordinated fashion to benefit

21   everybody -- particularly individuals with

22   disabilities, I think that at a national level the

1   Commission can do a lot to provide leadership --

2   as much from the bully pulpit as they can from a

3   regulatory perspective.

4   MS. LYLE: Thank you very much, Patrick.

5   We're going to have Kathy Brown, and then Paul

6   Schroeder.

7   MS. BROWN: Thank you, Elizabeth. I

8   wanted to perhaps return to this innovation

9   notion, and Larry's notion that getting a product

10   to market seems enormously important, at least for

11   our customers. So that a lot of the R&D and the

12   notion of how do you make life easier is the one

13   that we, I think, in the retail space are trying

14   to concentrate on.

15   So what is it that people need, and how

16   do we translate that into useable products?

17   So I remember back when the stumbling

18   block for discussion of the law was on the menus

19   that are creating in an IP world, and what do you

20   do about menus? Sell, we now have software,

21   obviously, that will talk the text -- right? So

22   there's talks, so that if you have a text, and you

1   need to -- you can't see it but need to hear it,

2   the software will read it to you.

3   Similarly, if you need to see something

4   but don't hear it, then we have text services that

5   are available that make life incredibly easier.

6   If you use American Sign Language, we have video

7   kinds of phones and services that allow you to use

8   your own language to communicate with someone

9   else.

10   How do you make these products available

11   in stores, and available for people to buy and

12   use?

13   And I think there's two things I want to

14   say about this. One, there's not an engineer I've

15   met who, if you don't say, "Can you solve this

16   problem?" won't say yes, they'll solve the problem

17   for you. And if you say to them, "Well, could you

18   solve the problem so we could make this product

19   affordable to folks?" They'll say, "Sure."

20   So part of what I want to stress that I

21   think the government can do is be a convener for

22   best practices so that in the retail space, in the

1   space where we're actually creating products,

2   we're listening to each other an to the community

3   of users who say, "This is how we need the

4   product, and this is how we'll use the product."

5   I think we've been -- really, with the

6   help of so many people in the community -- fairly

7   successful. We could be a whole lot more

8   successful in getting good products and services

9   out that just make people's lives easier in their

10   everyday interface with the world.

11   And I'd like to see us spend some real

12   time on that over the next year, to see if we

13   can't spread that sort of retail fever that I'd

14   like to see happen.

15   MS. RICHARDS: And, Kathy -- this is

16   Mary Beth Richards -- if I could.

17   You talked earlier about best-practices,

18   and I mean, what incentive, or what can we do to

19   provide an incentive so a business such as yours

20   is willing to share that best- practice, or that

21   product, or that innovation with someone else so

22   that it can be implemented in new products that

1   others are also developing at the same time?

2   MS. BROWN: I don't think it would take

3   much, Mary Beth. I think it's just a

4   collaboration, I think it's just a convening, to

5   say "How are making this work?" And what are the

6   -- we can try and take on the whole world and all

7   of the issues. But we could also try to take on

8   some simple issues and say, "How do we make the

9   devices accessible? How do we get them to the

10   sore? What makes them sell?"

11   By the way, every sales forecast we have

12   had for any one of these devices we have gone out

13   has just gone through the roof. So the curve is

14   this way.

15   Now this takes some convincing people

16   because, as all of you have said, marketers don't

17   think this way. Marketers do not think this way.

18   But once the marketers understand that there is a

19   whole audience, a whole consumer base for the kind

20   of simplicity that one can put into a market with

21   accessible products and services, they are

22   delighted. They are set, then, to do the next

 1   thing.

 2   And I suspect that if we put the

 3   marketers in the room together, they'd actually

 4   convince each other this is a good thing.

 5   MS. LYLE: Thank you. I think,

 6   actually, Paul Schroeder had something.

 7   MR. SCHROEDER: Paul Schroeder, with

 8   AFB. This actually builds, I think, on what we've

 9   just been talking about with innovation.

10   People with disabilities are some of the

11   most flexible, adaptive people you'd ever want to

12   meet. And one of the reasons why I think

13   sometimes people ask me, "Well, I hear more

14   complaints," it's because you'd be amazed at what

15   people do to make a product that seems

16   inaccessible actually work.

17   I love the number of people who, with

18   their iPods would actually count clicks to figure

19   out how to make -- blind people -- how to make

20   themselves able to use the folds and choices and

21   menus. I had no patience for that, by the way.

22   But a lot of people did.

 1   You know, Apple deserves a lot of praise

 2   for all of the stuff that it's done, including

 3   bringing access to the iPod. And one of the

 4   things I loved is that actually Apple has talked

 5   about access to the shuffle for everybody -- not

 6   because it was developed for blind people, the

 7   speech output, but because it's great for

 8   everybody because the shuffle doesn't have a

 9   screen.

10   So people with disabilities are flexible

11   and adaptable, which is great. But it also

12   creates a little bit of a problem, I think.

13   Because, in fact, a lot of us don't want to go

14   through the hassle of counting menus and clicks on

15   an iPod, or taking a cell phone and counting up

16   five times so we know that that's where we get to

17   our address book. And then if we go down six

18   times, it's our daughter's address, phone number,

19   whatever.

20   We don't want to do that. Most of us

21   don't want to do that. Most of you, who don't

22   have disabilities, wouldn't do that. You wouldn't

 1   tolerate it.

 2   And so what I think -- one of the things

 3   we need to do is to create opportunities for

 4   better structured input. Now, American Foundation

 5   for the Blind, we've made our investment in

 6   technology expertise, and we're willing and able

 7   and ready to be a partner and work with companies

 8   to provide that sort of structured input.

 9   To give you some sense of what the

10   real-use case is for somebody with a disability,

11   not the expert who's willing to put up with a lot

12   of struggles in order to make something work. We

13   need to foster that kind of action by people with

14   disabilities.

15   It would be helpful to have innovation

16   centers where we could, in fact, share the kind of

17   best-practices that we were just talking about,

18   where we can, in fact -- in the broadband

19   environment -- link consumer needs to technology

20   developers, and actually showcase and promote that

21   kind of work.

22   And to get back to my shuffle example,

1   make clear and show where these best-practices

2   have actually worked for everybody. And so where

3   speech output becomes an advantage for all users

4   of something that doesn't have a screen -- and,

5   you know, let's get serious. If we're really

6   going to do something about people using cell

7   phones at the wrong times, like driving for

8   example, you know, maybe, maybe not -- it may be

9   -- I know Dane's sitting next to me, and I've got

10   to be careful what I say -- but maybe it does, or

11   maybe it doesn't affect the driving safety if

12   you're staring at the screen. But my guess is we

13   ought to at least take that out of contention by

14   ensuring that people can interact with messages

15   and such without having to look at a screen.

16   And, you know, so for that purpose, for

17   drivers, they need the accessibility that I need

18   as a blind person. If that accessibility were

19   simply there, always, all the time available, the

20   drivers wouldn't have to go and find a third-party

21   app as I do as a blind person in most

22   environments.

1   So it would be great to be able to

2   showcase those kinds of activities, as well.

3   And then finally, at the end of the day,

4   though, consumers with disabilities want choices,

5   and we need to be able to -- it's nice to talk

6   about all these things, but we need to actually be

7   able to have choices so that I can go, just like

8   my non-disabled colleagues, and choose among a

9   variety of equipment and services that meet the

10   needs that I have, not the disability needs that I

11   have.

12   MS. LYLE: I've seen hands from Helena,

13   Jim, Ellen and Dane. And then we don't know

14   whether Grant's raising his hand or not. Oh,

15   Erik. I'm sorry -- why don't we go -- if you have

16   another question. Oh, you don't. Okay. Okay.

17   MR. GARR: Whatever you want.

18   MS. LYLE: Okay. Okay, so --

19   MS. MITCHELL: Well, mine's kind of

20   fast.

21   MS. LYLE: Okay.

22   MS. MITCHELL: Mine's kind of fast, so I

1   can go first. I want to agree with Paul. The

2   other thing we found in our center is that they're

3   early adopters. People with disabilities are

4   often early adopters. And also, to a point with

5   Katherine is that yes, we work really closely with

6   our industry partners.

7   And the one thing that we've done that I

8   would encourage is not just knowing what the best

9   practices are, but to know what the data says. We

10   have over 1,600 people that are users of -- we

11   have user-needs studies done all the time. We're

12   looking at all the ways the technology is used.

13   But the one thing that we haven't looked at, that

14   we have not located that there's a study been done

15   on, which is the study of broadband usage by

16   people with disabilities and the web applications

17   that go with it. So that's another area. Aside

18   from best practices, you need to do some more user

19   studies. Someone needs to do a user study. We'd

20   be glad to do it. It's our expertise.

21   MS. LYLE: Great. Thank you. Jim?

22   MR. TOBIAS: Jim Tobias. We're getting

1   perilously close to having a hallelujah moment

2   here. And I want to throw a wet blanket on that

3   as quickly as possible. I'm as enthusiastic about

4   technological opportunities as anyone, but I want

5   to repeat what Larry said before: That's not where

6   our problem resides. Our problem is in

7   implementation, awareness, management, support --

8   the non- technological side of managing a

9   technology program.

10   People with disabilities are not all

11   early adopters. And I think we run the risk of

12   extending a digital divide within the disability

13   communities if we make that assumption. I think

14   the large number of people -- and we know this

15   from their adoption of broadband and their

16   adoption of wireless -- are well below people

17   without disabilities. And we need to understand

18   that.

19   And it's not just the consumers, it's

20   the others who need to -- you know, the irony of

21   accessibility is that the experts, the people who

22   are lucky enough to be able to spend most or all

 1   of their time on it, are not the major points of

 2   contact in success of accessibility. It's the

 3   people, it's the special-educator who knows a

 4   little bit about assistive technology or

 5   accessible technology. It's the parent.

 6   In the 508 space -- we don't have a

 7   problem with the 508 coordinators, we have a

 8   problem with their challenge of rolling 508 into

 9   the general procurement process of their agencies.

10   And that's true at the State level, as well.

11   So until we grapple with those, you

12   know, sociological -- sociology of technology

13   issues, and anthropology of technology issues a

14   little bit better than we currently are doing,

15   we're going to achieve a kind of Potemkin Village

16   success, where the people who are the early

17   adopters -- and they're all in the Beltway, and

18   they're well-educated, high-income, high

19   educational attainment -- and they're all

20   successful, active users, above and beyond

21   non-disabled users.

22   But, you know, 90 to 95 percent of

1   people with disabilities are not in that category.

2   MS. LYLE: Thank you, Jim. And now

3   Ellen Blackler.

4   MS. BLACKLER: I have to try to recover

5   from that wet blanket, I guess.

6   I'll say I think Jim is right. And I

7   don't mean to minimize what I think Larry and Jim

8   raise, which are significant issues about

9   solutions we know, getting them adopted in the

10   market and adopted into products.

11   But -- I had an idea, based on something

12   we used to do back in the old Kennard Commission,

13   was sitting here thinking about this research

14   question, and came to mind the conference we used

15   to have when we were worried about access on

16   Native American reservations for broadband. And I

17   think the idea was, "Well, let's just get a

18   conference and get everyone talking to each

19   other," and this networking idea.

20   And I think there might be a place for

21   that. I know there's a lot of research going on

22   in the universities with, you know, smart graduate

1   students doing great things. And there's a lot of

2   research going on in our lab and other people's

3   labs. And maybe we ought to have an FCC-sponsored

4   conference and get some of these people talking to

5   each other.

6   And, you know, our labs have a whole

7   bunch of resources, and they're willing to share

8   them at the research level. And we could get some

9   of that going -- even if it doesn't really solve

10   Jim's adoption problem.

11   MS. LYLE: We have Dane next, and then

12   Allen.

13   MR. GARR: I have a question, too.

14   MS. LYLE: Oh, you have -- okay, go

15   ahead.

16   MR. GARR: I'm just going to ask my

17   question. So there. I have two questions, and it

18   relates to the "wet blanket" which, you know, is a

19   colorful metaphor, but probably useful for this

20   discussion.

21   The first question is, I'm curious how

22   capital forms around these problems. In

1   particular, you know, Ken, how do your companies

2   -- you know, when you're thinking through the

3   corporate product development portfolio, and

4   you're trying to allocate capital to all the

5   different things -- whether it's IBM or Apple or

6   whomever -- how do we really invest in this as

7   companies?

8   So that's one question that I'd like to

9   understand. You know, where does that capital

10   come from? How is it viewed? Is this viewed just

11   like any investment in any other product? Or is

12   it viewed as a one-off?

13   Because I think understanding that will

14   help us understand potential roles that government

15   may play in investing in these types of problems.

16   So that's kind of one question that I would ask

17   for the group. And that's not just -- and I

18   recognize that it's not just product development.

19   Having a nifty product is sort of half the battle,

20   and that investment needs to go through supporting

21   the product, rolling it out, getting it into a

22   market, et cetera, et cetera.

1   So that's kind of the first question

2   that I'd ask the group. We probably don't have

3   time to cover that here, but I think as we go

4   through different filings and all that, I'd love

5   to know more about that.

6   And then the second thing that I'd like

7   to ask -- and this is something that I want to

8   also mention -- as part of the Broadband Plan we

9   are fielding what I think is the first ever study

10   of unserved and underserved users. So most market

11   research on broadband looks at everybody, and then

12   asks like two or three questions about unserved

13   and underserved. Well, we basically are doing a

14   whole study just on that group.

15   Now, we don't have the answer yet. The

16   survey's hitting the field here in the next week

17   or two. There's a bunch of people upstairs

18   worried about that right now. But I think that's

19   going to be important.

20   But to the extent that you all have data

21   about the actual needs of certain segments of the

22   market that are unserved or underserved --

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1    including folks with disabilities -- that's really

2    useful to us.  It will help us calibrate the work

3    that we're doing.  So that's another question that

4    I would pose to the group.

5         And more than anything, I also just want

6    to say thank you.  This is really, really useful

7    and fantastic.  And I'm learning a ton.

8         But those would be my two questions --

9    if I'm allowed to ask them, Elizabeth.

10        MS. LYLE:  Thank you.  So feel free to

11   answer Erik's questions, as well as maybe

12   mentioning whatever it was that you were going to

13   say before, too.

14        So, next, Dane, I think -- right?

15        MR. SNOWDEN:  Dane Snowden, CTIA.  And I

16   think, Erik, to your question -- at least one of

17   your questions -- I don't think there really is a

18   one-off.  Most of the times when these products

19   are developed, they might have a single user in

20   mind, and then what happens, actually, is that

21   multiple users can benefit from it.  I think the

22   analogy that Paul gave here about the shuffle is a
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1   great one -- that it was designed for one purpose,

2   but many people are using it. And I think you'll

3   see more and more of that as innovation comes down

4   the pike.

5   And I'm actually not borrowing from you,

6   Ellen, because I was going to use the exact same

7   example -- but under the Powell Administration --

8   through our Tribal Affairs which, as you know, was

9   in my bureau when I was Chief of CGB. We wanted

10   to take the idea from the leadership of the

11   Kennard Administration and blow it up some more,

12   and get these tribes. And I think Commissioner

13   Copps spent a lot of time with us on Tribal Lands,

14   as well. And we found that having folks talk to

15   one another, and just listening -- not necessarily

16   with the pen to write a regulation, but listening

17   to what is the problem that you're trying to

18   solve, and what is the goal that you want to

19   achieve -- is instrumental.

20   And that helped us tremendously as we

21   developed policy, at least several years ago when

22   I was here at the Commission, in terms of how do

1   we advance more services for Tribal Nations. And

2   I think that will work for this venue, as well.

3   Now, it's not just talking to talk. And

4   I think that's the key phrase. And I know some of

5   the advocates will say we've done a lot of

6   talking. But a lot of it is information sharing.

7   And I think, as Kathy Brown said, best-practices

8   are a key part of this.

9   And to follow up with Mary Beth's

10   question to Kathy: we have to come up with what

11   the goal is. I don't think you're going to have

12   many competitors sit in a room and say, "Well,

13   we're going to design it this way," and have

14   another competitor say, "We're going to design it

15   that way." That's just -- I mean, I think that's

16   unrealistic.

17   But what you will have people do is sit

18   in a room and say, "Okay, let's hear exactly where

19   we're trying to go," and then go from there.

20   And I have to put a plug in for the

21   folks from BlackBerry RM. A lot of the devices

22   that Paul just was talking about, in terms of

1   having some accessibility. BlackBerry is showing

2   it right there, right down the hall, about the

3   services that have color-contrast, their fancy way

4   of saying "menu reading," I think they call it

5   "orator software." That is in the applications in

6   those devices that they're displaying for you

7   today, that's available right now.

8   And I think that's a piece that we have

9   to always look back. That there are things that

10   are happening, so we need more information to get

11   out to the masses of what's available.

12   And I have to put a plug in for Access

13   Wireless, and also remind everyone that the

14   wireless industry does not support texting while

15   driving.

16   (Laughter)

17   MR. GARR: Duly noted. Can I add a

18   third question, if I may. And I know I'm at great

19   risk, since we're slowly running our of time. But

20   your point makes me -- kind of takes me to this

21   third question. And, again, it probably can't be

22   answered now.

1   But is network performance a barrier to

2   certain types of applications in this area? And I

3   think I -- you know, the easy answer is "Yes."

4   I'm sure -- I think I know that part.

5   But I'd love to know if folks,

6   particularly on the equipment side, have a sense

7   of what can we do with more capacity? And I don't

8   just mean speed. I don't want to get into a big,

9   like, "Is it 2 megabits, is it 10 megabits" thing.

10   But to the extent that better broadband gives us a

11   better petri dish to make better tools, I'd love

12   to understand the thoughts that are present in the

13   industry on that -- whether that's research being

14   done at universities, or being done in the

15   corporate setting. I think that would be another

16   useful thing to know about.

17   MS. LYLE: Thank you. Alan, you had

18   your hand raised.

19   MR. BRIGHTMAN: So, just a couple of

20   comments with regard to this implementation

21   issue.

22   I have thought for years that the

1   disabled community needs a better public relations

2   agency. That too often, certainly the impression

3   that corporations have --

4   SPEAKER: (Off mike)

5   (Laughter)

6   MR. BRIGHTMAN: Not really. The view

7   the corporations have, interestingly -- and not

8   surprisingly, I suppose -- is that, first of all,

9   the market is way too small -- and particularly

10   the sub- segments within the disability community.

11   And it's, ironically, arrived at by people saying,

12   "Well, how many folks who are blind use the

13   internet?" And you say, "Well, we really can't

14   answer that because --

15   So, it reminded me of just one quick

16   little anecdote that might bear on this. Years

17   ago, when I was on the Cambridge Commission for

18   Handicapped Individuals was what it was called, we

19   required of the MBTA -- the subway system -- that

20   they make a proposal that they made to extend the

21   subway line, that the stations had to be made

22   accessible. And anyone who knows Cambridge knows

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1    that the Harvard Square subway station has two

2    ridiculously long sets of stairs that go down to

3    the tracks.

4         The MBTA at that time put a gentleman

5    with a clipboard down onto the tracks where the

6    train comes in for two weeks.  And he was asked at

7    the end of these two weeks, "How many people in

8    wheelchairs actually use the subway?"

9         (Laughter)

10        SPEAKER:  (Off mike)

11        MR. BRIGHTMAN:  Yes, exactly.  And, you

12   know, and his answer was, "Well, there was one,"

13   because his friend schlepped him down the -- you

14   know the two flights of stairs.

15        I think, seriously, if we stop talking

16   about fulfilling the needs of people with

17   disabilities, but rather talked in terms of

18   customers who are as discerning and demanding and,

19   in some cases, as bitchy as any other customers, I

20   think that we would make a lot more progress.

21   That's the only thing I mean by the PR agency.

22        SPEAKER:  (Off mike)
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1   (Laughter)

2   MS. LYLE: Karen?

3   MS. PELTZ STRAUSS: I'd like to redeem

4   myself a little bit and move away from that.

5   I actually just want to get back to your

6   question about the research, and just put in a

7   plug for when you do do your study of unserved and

8   underserved users, beware that accessing

9   information in the deaf community may be a little

10   bit different than accessing information in other

11   communities. So, for example, if you were

12   planning on using telephone calls, that won't

13   work.

14   And you may want to tap into some

15   national organizations like the National

16   Association of the Deaf, Communications Service

17   for the Deaf, et cetera, to find out the best way

18   of reaching those individuals.

19   The RERC on Telecommunications Access

20   put -- itemized a number of issues that need to be

21   looked with respect to such research, including

22   the rate of broadband subscribership, of course,

1   the affordability of broadband services, the

2   affordability of assistive and adaptive

3   technologies, barriers to broadband

4   subscribership, applications and services likely

5   to be used by people with disabilities, like video

6   telephony for people who are deaf.

7   And the economic and social benefits of

8   providing people with disabilities with broadband

9   services. We're not really sure that that's ever

10   really been looked at. And that was one of the

11   questions I know that Chairman Jankowski was very

12   interested in when I had a conversation with him

13   about disability access. What are the economic

14   and social benefits?

15   And finally, reasons older Americans

16   fail to adopt, or abandon, broadband technology,

17   we mentioned before that we have an aging

18   population that is going to be -- you know, that

19   already doesn't use broadband as much as the

20   general population that's younger. And the

21   question is whether they would be more likely to

22   drop broadband if they start having accessability

 1   barriers.

 2   And then the only other thing I want to

 3   mention is that I love the idea of an inter -- of

 4   collaboration and coordination of best-practices.

 5   I mean, I think that, you know, everybody loves

 6   it. It's kind of apple pie and motherhood. But

 7   the problem is getting it going.

 8   And we tried this in 1996, after the

 9   TAAC -- the Telecommunications

10   Access/Accessability Committee. There was a group

11   called AAES -- American Accessibility of

12   Engineering Specialists -- okay. Okay. It was

13   engineering specialists who tried to get together

14   and share best practices. And it didn't really

15   work. I mean, or it didn't, for some reason it

16   never really got off the ground.

17   So I guess this is a pitch for the FCC

18   to take the leadership on this. I think that the

19   industry would be very open to it, but I think

20   it's unlikely they're going to do it on their own.

21   There have been times that they have

22   done it. The Hearing Aid Compatibility incubator

1   is a great example -- but that was done after a

2   law was passed. TAC, and TEITAC, and ITAC -- they

3   were all in response to laws.

4   If we're planning on moving forward and

5   not having laws govern everything, then we need

6   some leadership from the FCC to make sure that

7   this moves forward in terms of best practices.

8   MR. GARR: Can I get the cite on the

9   list you were mentioning?

10   MS. PELTZ STRAUSS: Yes, these are

11   comments by the Rehabilitation Engineering

12   Research Center on Telecommunications Access.

13   MR. GARR: Great. Thanks.

14   MS. LYLE: We probably just have time

15   for a couple more comments, and then I'll ask the

16   panel if they have any last questions.

17   I think Ken was raising his hand, then

18   Jane? Yes, Gregg, okay.

19   MS. MAGO: If I could just -- I just

20   want to do one quick follow-up to what Karen said.

21   I think it's important to recognize that

22   there have been a lot of leadership roles that the

 1   Commission has played. And the Commission's been

 2   doing a very good job in trying to bring together

 3   different groups in different forums, and working

 4   on making sure that there are things moving

 5   forward.

 6   In the emergency area, I think you've

 7   been working a lot with the folks at FEMA and DHS

 8   to make sure that the IPAWS moves forward. As we

 9   go, the Commission has pulled together the various

10   groups over time. I was saying to Karen earlier,

11   the MISRIC group that put together for emergency

12   management issues, bringing together all of the

13   folks. And the various efforts that are being

14   undertaken right now by the different engineering

15   groups -- that all said, I think that there is

16   very much for the Commission to bring that

17   together for best-practices, to recognize all of

18   those different efforts that are being done in a

19   productive way, that works -- that's encouraging,

20   without trying to take over the process, if you

21   will -- I think is exactly what is needed here.

22   And, you know, we of course will work

1   with whatever we can to make that happen, too.

2   MS. LYLE: Jim and Gregg -- and Claude?

3   Okay.

4   MR. TOBIAS: This is Jim Tobias. I just

5   wanted to make a quick response to Erik's question

6   about the economics of it.

7   I think there are companies that have

8   accessibility programs. And I think they're

9   largely driven by regulatory need, and wanting to

10   reduce the sales jeopardy in a 508 environment, or

11   any other environment -- okay? But that's not an

12   area where I don't think the Commission can do

13   much, aside from what it's already doing.

14   But if we had better econometric tools

15   for making decisions about -- quote-unquote --

16   universal design, and offered those to industry, I

17   think that would be valuable. And I think we can

18   generate those.

19   So instead of thinking about it

20   program-by-program, think about it

21   feature-by-feature. Because that's how products

22   are built -- right? The feature either makes the

1   list or doesn't make the list. The ones that make

2   the list have, typically have larger potential

3   markets.

4   And we can make very good claims, on a

5   feature-by-feature basis, given the product, that

6   an accessibility feature has a non-disability

7   potential market. We need to refine that, instead

8   of what we're doing now which is, you know, kind

9   of hand-waving about universal design.

10   MS. LYLE: Ken?

11   MR. SALAETS: Ken Salaets, ITI. Just a

12   quick response to Erik's question about what

13   attracts capital to an activity.

14   Just to play off what Kathy said,

15   engineers essentially in our industry are trained

16   to address the "Can we?" Questions. We have

17   policy folks that address the "Should we?"

18   questions, and then we have Federal marketing

19   folks who just say, "Yes," and then ask "What was

20   the question?" So, having gotten that out of the

21   way, there's a lot of things that motivate

22   companies, just like there's a lot of things that

1   motivate Members of Congress, that motivate

2   Commissions, et cetera, to really focus on this

3   issue.

4   In my experience, I think one of the key

5   identifiers is you know somebody, or else you have

6   a disability. And that seems to be -- I mean,

7   whether you're talking about the leadership on the

8   Hill, whether you're talking about somebody within

9   a corporation, that is often a driving factor.

10   The challenge is, how do you get beyond

11   that, where you're not just doing it because you

12   have real-life exposure to the challenge of trying

13   to interact in a very digitized economy or, you

14   know, world.

15   We will address this in some detail in

16   written comments that follow up this conference.

17   But I think it really goes to the point -- it's

18   not just simply a market -- to Paul's point. You

19   know, market factors are critical, they're

20   important. It creates incentive to do things.

21   And to Karen's point, you know, there

22   are other motivating factors. Section 508 didn't

1   create an industry response to accessibility, but

2   it certainly accelerated that response and focused

3   it. And even in some cases, it's still not

4   clearly focused, you know, from some companies in

5   some cases. But nevertheless, it really helped

6   generate a demand that got in our face a little

7   bit and helped out.

8   I'm not suggesting that you need to get

9   in our face, per se. In fact, I would ask you not

10   to get in our face. But having said that, it's a

11   partnership. It's really a public-private

12   partnership, and there are many stakeholders that

13   are around this table, that are in this room, that

14   are listening on the web or wherever, that have to

15   be engaged in this process. And just by virtue of

16   having these sessions, and the FCC focus on this,

17   it gets our attention, and it sharpens that

18   attention.

19   And I think it's extremely helpful, and

20   I would encourage you to continue to have fora of

21   this nature.

22   Thank you.

 1   MS. LYLE: Thanks very much. Then I

 2   guess Claude, and then Gregg.

 3   MR. STOUT: In talking about access to

 4   broadband, don't just open the internet to people with

 5   disabilities. It doesn't just make more and more

 6   products available to people with disabilities. I

 7   think we need to work together to change the mindset

 8   of many people out there who remain ignorant of folks

 9   with disabilities -- what our capabilities are, our

10   needs, our issues. There's just folks out there that

11   don't know. Just because we have a disability doesn't

12   mean we can't do anything. Often, you find you can do

13   everything except that one little thing.

14   If we can build that kind of thinking -- start in the

15   elementary schools, raise people that way. When they

16   go to colleges, when they become engineers, when they

17   become marketers, if we've instilled that kind of

18   principle in their mind, in talking about the ADA or

19   universal design -- again, we need to remember,

20   technology doesn't solve all the trouble.

21   But the Commission can use its bully pulpit to push

22   technology, to push full broadband access, and full

 1 community involvement. And then I think we will have

 2 made it, at that point.

 3   MS. LYLE: Thank you very much, Claude.

 4 And then I guess Gregg will be the last one,

 5 unless there are other questions.

 6   MR. VANDERHEIDEN: Okay. The thing I

 7 want to talk about is a little to do with how we

 8 look at this whole thing in your sampling issues,

 9 as well.

10   The comment was made earlier -- I'm

11 going back to some stuff that Jim was talking

12 about. You know, are people with disabilities

13 early adopters or later adopters? Or are they

14 non-adopters? And the answer is, "Yes."

15   And so what we keep trying to do is to

16 characterize people with disabilities as if it's

17 one person. And blind people as if it's one

18 person.

19   You know, there are websites that people

20 who are blind can use, no problem, and people who

21 are blind can't use at all -- because you're

22 talking about different people. I mean, we have

1   (inaudible) and we have the person on the street.

2   And what we need to be looking at is:

3   Are we creating technologies -- and today, when we

4   say something is "accessible," very often we mean

5   it's accessible to a very bright person or a very

6   creative person. If you've ever tried to --

7   everybody in this room, please go take a

8   screen-reader, and go try and use it to do a day's

9   worth of work. And you will very quickly realize

10   how incredibly complicated it is. And you say,

11   well, yeah, but I've not trained in it. Get

12   trained in it. You are all extremely bright

13   people, and you will find that it is like trying

14   to read a book through a soda straw. You know,

15   you can sort of do it. But now try and read it

16   through a soda straw where somebody else is

17   holding onto the straw, and you're telling them

18   how to move the straw so that you can try and read

19   the book. Okay? Yes, you can sort of read the

20   book, but it's nothing like what you think.

21   And if you're trying to do this --

22   again, these technical devices and a lot of our

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 1    solutions -- phones that work for people who are

 2    blind.  But go take the full spectrum of people

 3    who are blind -- okay?

 4              We in this room have a lot of trouble

 5    dealing with out technologies, our phones.  How

 6    many times have you turned to somebody else and

 7    said, "I can't make this work?"  And we are in the

 8    top couple percent, in terms of what I would call

 9    "technology quotient."  Okay?  And if we have

10    trouble, what about the people in the bottom half

11    -- okay?

12              And now, put blindness on top of that.

13    Put some of the other disabilities on top of that.

14    Think about the fact that people who are blind

15    also have all the other disabilities -- cognitive,

16    language, learning disabilities.

17              So when we're trying to look at this,

18    sometimes we talk about the fact that we should

19    stop, because we have something which people who

20    are blind or have some disability can use.  And

21    very often it just means that we've just taken

22    that little veneer off the top.
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          1   If broadband is what we say it is, and

          2   if it's as important as we say it's going to be --

          3   and, actually, I would say as we know it's going

          4   to be, because we can connect the dots -- then

          5   think of the whole portions that we're leaving

          6   behind when we declare success because a few of

          7   the brightest and the best can use them. So let's

          8   think about it when we're doing our sampling.

          9   I saw a study the other day that talked

          10   about people who are older, and how they all

          11   embrace the web. And then you find out that it

          12   was sampled from people on the web. Or it was

          13   people using e-mail, and they're not on the web.

          14   Well, they're already using computers --

          15   okay? How about the people who can't figure out

          16   how to use a computer to do e-mail? You know, how

          17   many of those are on the web? And how many of

          18   those think that the web is easy?

          19   So we have to kind of look at our

          20   sampling, and how we're going about looking at

          21   this. And even when we go to disability groups,

          22   we're talking to people who they know -- these are

 1   connected people, these are active people. Is

 2   this really the full spectrum?

 3   So we need to be looking at this, and in

 4   our policy and in our going forward, we need to be

 5   looking at how we're going to serve -- always

 6   think about, "Is this the bottom half?" Not the

 7   top half, the bottom half. That's an awful lot of

 8   people. And are we serving that half?

 9   Thanks.

10   MS. LYLE: Thanks very much, Gregg.

11   Anybody -- Commissioner Copps, anybody else have

12   anything else you want to say? Well, thank you

13   very much for coming to this marathon session

14   today. It's been extremely helpful. We have a

15   lot of homework, is my take-away from all of this.

16   Christian Kane from the National Purposes Director

17   said today, you could write a whole report on

18   these issues.

19   Thank you for your help.

20   (Whereupon, the PROCEEDINGS were

21   adjourned.)

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