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H.R. _____, DRAFT LEGISLATION ENHANCING ACCESS TO BROADBAND TECHNOLOGY AND SERVICES FOR PERSONS WITH DISABILITIES

HEARING

BEFORE THE

SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET

OF THE

COMMITTEE ON ENERGY AND COMMERCE
HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

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H.R. _____, DRAFT LEGISLATION ENHANCING ACCESS TO BROADBAND TECHNOLOGY AND SERVICES FOR PERSONS WITH DISABILITIES

THURSDAY, MAY 1, 2008

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TELECOMMUNICATIONS
AND THE INTERNET,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:42 a.m., in room 2123, Rayburn House Office Building, Hon. Edward J. Markey (chairman of the subcommittee) presiding.

Members Present: Representatives Markey, Gonzalez, Inslee, Stearns, Upton, Shimkus, and Radanovich.

Staff Present: Amy Levine, Mark Seifert, Tim Powderly, Colin Crowell, David Vogel, Philip Murphy, Neil Fried, and Garrett Golding.

OPENING STATEMENT OF HON. EDWARD J. MARKEY, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF MASSACHUSETTS

Mr. MARKEY. Good morning, and welcome to the Subcommittee on Telecommunications and the Internet and one of the most important hearings that we are going to have during this 2-year period. The rise of digital technologies and services meshed with broadband access to the Internet is driving further innovation across communications markets.

As these changes challenged marketplace participants and spawned new services and markets, various industries have lamented over recent years that Congress and the Federal Communications Commission simply cannot keep pace. They repeatedly assert that our Nation's laws and regulations are antiquated. They have successfully pressed for changes and continue to push for additional new ones. And various laws and regulations reflect new technologies and new competition. "Hurry up," they say. "Get on with changing all these old regulations. Quickly update our communications laws."

However, when it comes to updating our laws and ensuring access for individuals with disabilities, we seem to be hearing a different story from the industry. "Slow down," they say. "Not so fast. Shouldn't we wait and see where technology is going first before we start updating regulations?"

It seems to me that the question in this area is not whether Congress will keep up with the changes in technology, but rather, will the industries keep up with the changes that are already happening in millions of homes all across our country already?

That is because millions of consumers today are utilizing an array of exciting and innovative new technologies that are Internet based. Our national media environment has gone from encompassing not only the traditional media but new media. Indeed, we are at a point today where the people publish and blog and communicate themselves. The challenge for the industries is whether they will keep pace in ensuring that these empowering technologies enhance the lives of all consumers or whether individuals with disabilities will fall behind.

The fact is that the new technologies and services in themselves are neither good nor bad. They only become good when we animate such technologies with the human values that reflect the best of what we are as a society. In other words, the wizardry of the wires and the sophistication of the software programs do little for those who cannot affordably access or effectively use them.

Our job as policymakers is to help ensure such affordable access and utilization. And this is what the draft legislation I have circulated is intended to do.

This is not to say that companies in various fields have not made efforts. Progress in ensuring that communications technologies serve the needs of individuals with disabilities is evident in several products and services offered by many companies, including Apple, Sun Microsystems, Time Warner, Adobe, Microsoft, and other high-tech wireline and wireless providers. And as our population ages, there will be more of us who will inevitably benefit from these efforts. There will be a tech fair sponsored by many of those companies on May 16, so that Members and staff may see the products and services such companies are offering or developing in this area. These initiatives are to be applauded, and I commend them.

And finally, I must note that many of the arguments being raised against provisions of the draft bill are eerily similar to arguments raised against hearing aid compatibility or against the closed-captioning bill I sponsored and successfully battled to make law in 1990 with the help of King Jordan, the president of Gallaudet University, who is sitting out here in the audience today. Welcome back again, sir.

In that debate, we were told that mandating closed-captioning would add $20 to the price of a TV set. That it was overly burdensome. It would crush the industry. That it would take a lifetime and a fortune to caption all the movies and television programs out there. Notwithstanding those objections, we passed my bill, and the President signed it. And today, not only is it indispensable to millions of individuals who are deaf or hearing-impaired, but closed-captioning is used in immigrant families to help them learn the language and seen in sports bars across the country. Moreover, the mandate didn't cost remotely close to $20. It cost about $1 per TV set.

The purpose of today's hearing is to better understand the needs of individuals with disabilities, as well as their excitement about what new technologies can offer. We will also be able to gauge the

extent of efforts by companies and industries in meeting these express needs and aspirations and how best to update our laws in the new digital broadband Internet environment, because even though the technologies and marketplace may change, the values we seek to instill in those technologies are immutable.

I want to thank our incredible panel of witnesses today for being here. I am really looking forward to this hearing.

Let me turn now and recognize the Ranking Member of the Committee, the gentleman from Florida, Mr. Stearns.

OPENING STATEMENT OF HON. CLIFF STEARNS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Mr. STEARNS. Thank you, Mr. Chairman. Also, I would like to welcome the former president of Gallaudet University. Both Mr. Markey and I have played basketball out at the fine university against each other for congressional fundraising, and so we are very pleased to have him and others here.

And I thank you, Mr. Chairman, for this thoughtful hearing and for the witnesses, the time they are taking off to testify.

I think, as you pointed out, the Internet is such an unbelievable thing that obviously no geographic boundaries exist anymore. You can download a movie from India, legally of course, sitting on a beach in Florida while participating in a videoconference here in Washington, D.C. All of this is made possible because the marketplace has flourished, allowing consumers to decide themselves what technology works for them.

But as this technology revolution speeds along, and the marketplace continues to boom, it is important to ensure that people with disabilities are not left behind. And I think that is the goal of this draft legislation.

All people, Mr. Chairman, should be afforded the opportunity to use and enjoy this amazing technology that is available. I think we all in this room can agree on that point.

The question then becomes, What is the best way to achieve that ideal? Do we need more government regulation? That may be possible. Or do we need to allow the market to work itself in a light regulatory manner, touched as a possibility of letting the market lightly work these things through? These are questions that we need to explore during the hearing today. I look forward to hearing the testimony from our distinguished panel.

Now Mr. Chairman, under the Communications Act, manufacturers and carriers are already required to make telecommunications devices and services accessible to people with disabilities when doing so is readily achievable. The statute also requires telephones to be hearing-aid compatible, requires telecommunications providers to help pay for operators that relay phone conversations between people with hearing or speech disabilities and people without disabilities, and requires television programs to be closed-captioned.

Nevertheless, we are becoming victims of our own success today. Due to widespread deregulatory policies, many new technologies do not fall within the existing statutory language. To address this problem, a draft has been circulated by the Chairman that would greatly expand current disability access obligations to nearly all

Internet-enabled communication services, equipment, and also the software.

It would replace the readily achievable standard with a tighter, stricter one that requires incorporation of accessibility unless doing so would cause a quote, "undue burden," end quote. And it would allow a private right of action, enabling someone to sue in court for alleged violation of these requirements.

New regulations may not be needed because the tech and wireless industries are already taking the necessary steps to make certain that their products and applications are indeed accessible to all people. For example, AOL, Google, Microsoft, and Yahoo! have joined forces to form the Internet Captioning Forum, the ICF. The ICF was established to overcome technology and production barriers and increase the amount of online video accessible to people who are deaf or hard of hearing.

In addition, Mr. Chairman, a recent CNN story highlights how wireless technology is helping a Marine Corps corporal walk again after he lost both of his legs when an IED exploded under his Humvee in Iraq. Corporal Joshua Belile is beginning to walk again with the help of short-range wireless technology known as Bluetooth, which also makes hands-free cell phone earpieces work. This corporal has prosthetic legs outfitted with Bluetooth technology. Simply, computer chips in each leg send a signal to motors in the artificial joints so that the knees and ankles move in a coordinated fashion.

So the goals of this legislative draft are laudable, and we can all agree on the final destination. That is to ensure that all people with or without disabilities are able to take advantage of the remarkable technology that is available today.

But will this legislation take us there? Or are the obligations too broad that the law of unintended consequences may take hold? These are the alternatives we are discussing today. I hope this hearing will help shed some light on these questions, and I appreciate very much the opportunity to work with my colleagues and the disability community and industry to extend the benefits of the Internet revolution to people with disabilities, while at the same time preserving the innovation that this Internet brings.

And I yield back.

Mr. MARKEY. The gentleman's time has expired.

Mr. MARKEY. The Chair recognizes the gentleman from San Antonio, Mr. Gonzalez.

Mr. GONZALEZ. Waive opening statements, Chair.

Mr. MARKEY. The Chair recognizes the gentleman from Texas, Mr. Green.

OPENING STATEMENT OF HON. GENE GREEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. GREEN. Thank you, Mr. Chairman. And I would like to have unanimous consent to have a statement placed in the record.

And I will just briefly talk about the hearing. I want to thank you for holding the hearing on the draft legislation to ensure persons with disabilities are not left behind, as voice over Internet protocol and other technologies are increasingly prominent in the

marketplace. I look forward to hearing our panel and thank our witnesses for being here today.

We can look at all sides of what industry is doing, what needs to be done, so we can craft and improve the draft bill. And, Mr. Chairman, I am so happy you have called this hearing, because with every year—or sometimes every day—there are new technologies out there, and we need to make sure it is available to everyone and particularly folks with disabilities. And with that, again, I would like to have my full statement placed in the record.

Mr. MARKEY. Without objection, it will be included in the record.

[The information follows:]

STATEMENT OF HON. GENE GREEN

Mr. Chairman, thank you for holding this hearing on draft legislation to ensure persons with disabilities are not left behind as VOIP and other technologies become increasingly prominent in the marketplace.

I look forward to hearing from today's panel—we have a broad range of witnesses, and hopefully we can look at all sides of what industry is doing, and what more needs to be done, so we can carefully craft and improve the draft bill.

It is clear that without government action, relatively new and developing technologies will not be available to all individuals with disabilities.

Industry has addressed the requirements of a large percentage of the disabled population, but as the Internet is used more and more heavily for communication, as a primary source for news and entertainment, and for other purposes, we must make sure that this new medium is as accessible for persons with disabilities as analog television and landline telephone service have been over recent decades.

Many television news channels are supplementing their news programming with online content, whether it is online text or video or podcasts.

Other forms of entertainment such as online movie rentals and high-definition Blu-ray movie format are becoming more commonplace.

So many of these changes and advances in technology are being driven by demands for convenience from consumers—the intent of any legislation should be to ensure that persons with disabilities can take advantage of, and benefit from, these conveniences, as well.

There is no doubt that text messaging, PDAs, voice-command cell phone functions and similar features have benefited the disabled community and made communications as mobile for persons with disabilities as for the non-disabled population, but it is still difficult for persons with disabilities to communicate in real-time with mobile devices.

It will likely take some collaboration by software makers, device manufacturers, and service providers to achieve this, but it is important that it happen.

And I am pleased we are looking at legislation to ensure that addressing the requirements for persons with disabilities is incorporated into the development of new services and products, and not just an afterthought.

Again Mr. Chairman, I commend you for your work on this legislation, and I look forward to hearing from today's witnesses on how we can improve this draft.

Mr. MARKEY. The Chair recognizes the gentleman from Michigan, Mr. Upton.

OPENING STATEMENT OF HON. FRED UPTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. UPTON. Well thank you, Mr. Chairman. And I would just like to say that I look forward to working with you and Chairman Dingell, Ranking Member Barton, and my good friend, Ranking Member Stearns of this subcommittee, to move legislation on down the road.

This is an important issue. For me, I have a long record in terms of helping folks on the disabled side of our country. It was one of my first pieces of legislation when I worked with Kweisi Mfume to

allow a tax credit, to provide a tax credit for small businesses to comply with the ADA bill. I knew that it wasn't small businesses that wanted to discriminate against those with disabilities. But we needed to afford them the means so they could in effect make the changes in their storefronts, their stairs, their restrooms, their counters, to try and make it in fact more accessible. And we have seen great strides since the passage of that legislation that was signed by Bush 41.

But the world has changed. Communications devices, the Internet, computers, telephones, all those different things have changed quite dramatically from where we were back in 1990, as you cited the legislation on the streaming on TVs. And we need to work with industry and with the community to make sure that in fact no family is left behind.

And I think you have done a good stab in terms of the first draft of this legislation. I just want to pledge that I look forward to working with you to improve this legislation further so we can get something through the Congress. And I yield back my time.

Mr. MARKEY. The gentleman's time has expired. The Chair recognizes the gentlelady from California, Ms. Capps.

OPENING STATEMENT OF HON. LOIS CAPPS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. CAPPS. Thank you, Mr. Chairman. And thank you so much for holding this hearing and for your leadership on the issue of communications and media accessibility.

I am so grateful to each of our panelists, who have taken the time and the effort to appear before us today. We really are welcoming your testimony. I look forward to learning many things from you.

The draft bill that we are discussing today is an important first step in ensuring that our latest communications revolution does not leave behind persons with hearing, speech, and vision disabilities.

Mr. Chairman, I have to confess that I have already learned something in this hearing, and that is that it took legislative action, a bill passed by Congress and signed into law, to have this caption scroll across the bottom of my television set and the one that we are looking at here. It took an act of Congress for that to happen. I always took it for granted that it was always there. It shows how important hearings like this are and the legislation that can lead to further changes. So I thank you for that strong tradition that we are following, hopefully, out of this hearing today.

In preparing for today's hearing, I was struck by the number of everyday tasks that can be taken for granted by individuals without sensory impairments. We really do take for granted all of these abilities that we have and don't realize what the world is like for someone who is limited in any one of the areas of the senses. But Internet accessibility, video programming, and navigating television and cell phone menus can be nearly impossible or really impossible for persons with disabilities. From my perspective, these technologies have existed long enough now for compatibility issues to have been addressed by the industries.

So I am disappointed by what I interpret—I will wait to be instructed by our panelists—but I believe that there is a lack of will among many industry actors to address these concerns on their own. I encourage them to incorporate the concept of universal design into their product development cycle. There is no reason not to do this. Simply put, the Internet and IP-based technologies hold enormous potential for persons with disabilities. The right assistive technologies can allow for so much greater independence, employment opportunities, and social interactions. So there isn't any reason why the incredible advancements we are witnessing today, using every day, taking advantage of every day, would exclude the very people who would benefit the most from these technologies. So again, I thank you for this hearing. I look forward to the testimony of our witnesses, and I yield back.

Mr. MARKEY. Great. The gentlelady's time has expired. The Chair recognizes the gentlelady from California, Ms. Solis.

OPENING STATEMENT OF HON. HILDA L. SOLIS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. SOLIS. Thank you, Mr. Chairman and Ranking Member Stearns, for holding this very important hearing. Today we are taking an important step forward to ensure that those with disabilities can still enjoy the innovations of telecommunications. With innovative technologies like Internet phone service and video relay service, people who are vision-impaired or hearing-impaired have new options to communicate.

It is important also to ensure that advancements in technology don't leave behind vision-impaired or hearing-impaired persons who speak another language other than English. And I say that because in my own congressional district, about 68 percent of the families do not speak English. They speak another language. And under current law, Telecommunications Relay Service, TRS, providers are required to provide Spanish services to interstate callers, and VRS providers operate in both Spanish and English. And for closed-captioning, the FCC has been phasing in requirements for Spanish-language television. And by 2010, all Spanish-language television will be closed-captioned in Spanish, which I think is really important.

And I am a cosponsor of the Training For Realtime Writers Act which would provide competitive grants to train and recruit transcribers who produce closed-captioning, as well as in other fields—something very important. While this legislation is not in the jurisdiction of this committee, it is important to note that we must ensure that the workforce of captioners remains steady and does include and is more inclusive of other languages.

I look forward to learning from all our witnesses today. And I thank them and those in the audience, too. I am very proud that we are having this hearing. I also want to thank the Chairman for his pioneering work on captioning. That is something new that I learned today. Thank you, Mr. Chairman.

Mr. MARKEY. Great. The gentlelady's time has expired. All time for opening statements from Members has expired. We are now going to turn to our panel of expert witnesses.

And our first witness is Russell Harvard, who is an actor who has appeared in film and television. His most recent appearance was in the Oscar award-winning movie There Will Be Blood, where he played the adult son of Daniel Day-Lewis. Mr. Harvard has also appeared on CSI: New York with Marlee Matlin.

Mr. Harvard, you are in good company, as Ms. Matlin appeared before this subcommittee. So we welcome you here. Mr. Harvard is the third generation of deaf individuals in his family. Mr. Harvard, we look forward to hearing your perspective as a young person with disabilities and your views on the promises this new generation of technology brings to you and to your peers.

STATEMENT OF RUSSELL HARVARD, COALITION OF ORGANIZATIONS FOR ACCESSIBLE TECHNOLOGY (COAT)

Mr. HARVARD. Thank you, Chairman Markey and Ranking Member Stearns and members of the House Subcommittee on Telecommunications and the Internet. I want to thank you for giving me the opportunity to appear before you today.

My name, as you said, is Russell Harvard, and I am an actor, and I am deaf. I am a third-generation deaf person in the family. I am honored to have this opportunity to testify on an issue that affects millions of people with disabilities. I am here on the behalf of the Coalition of Organizations for Accessible Technology, COAT, as they are called, a coalition that is yet only 1-year-old but which has already grown to nearly 200 national and regional and community-based organizations dedicated to ensuring that Americans with hearing, vision, speech and other disabilities are not left behind as the Nation moves to innovate Internet and digital communications technologies.

Like many consumers, I am a big fan of technology. It empowers me to access the information I need to be successful in my profession and as an active citizen. Unfortunately, all too often, I and other people with disabilities like me have been left behind as technology has advanced. For example, back in the 1980s, my family paid $200 for a captioning decoder box, because TV didn't have the ability to display captions on their own. When my family's decoder box got too hot, the captions would flicker, making them hard to read. I remember my stepmom would not let me watch any television for an hour before All My Children just so the decoder box would be cool enough for her favorite program.

It took a law developed by your subcommittee to require all TVs with screens larger than 13 inches to have chips to display closed captions. This was a great law. At the time it was passed, the law covered 96 percent of all television sets. But times and technology are changing dramatically. Now, my friends and colleagues can watch their favorite shows on their cell phones or on their laptops. They also download and play back sports events on MP3 players. But once again, I and others who cannot hear are left out of this whirlwind of technological change. Hardly any of these smaller devices display closed captions.

So we are going back to you, 15 years after the Decoder Act was passed, and we are asking you now to take this law to its next level. That limitation of the 13-inch screens has worn out its wel-

come. Now all devices that receive or display video programming should be required to have closed captioning.

Now to my next concern, making sure that I and others can actually figure out how to turn on captions. These are exciting times. Digital pictures are clearer, and I am told digital sound is crisper. Under the FCC rules, I am also supposed to be able to control the font size and the color of the closed captions themselves. But the new digital sets are so complicated to use that few people have figured out how to access these features.

I want to suggest to you one thing. The next time you go to a hotel, try to turn on the captions. The first thing you will probably do, as most people do, is to look at the remote control. Most likely you will find buttons for volume control and channel selection and a lot of other buttons that won't make sense to you. Chances are you won't find a closed-captioning button to turn it on. Next, you will probably go to the TV's on-screen menu. Good luck as you try to navigate the maze of complicated choices. If you call down to the front desk and are lucky enough to get the hotel engineer, you can watch him come and try to experience the same problems that you had. I cannot tell you how often this scene plays out across America.

This proposed law will fix this. It will require video devices to have a button for captioning on the remote control and enable viewers to control captioning features on the top tier of the device's on-screen menu. Remember, captions are to us what volume is to you.

Once I have the ability to access the captions on video devices, we also need to make sure that the programs received by those devices actually contain captions. This brings me to my final concern. It seems that everytime a TV show ends by telling viewers to watch the show again, with enhanced features on the Internet, I can't do that. As of now, only a handful of TV shows on the Internet have captions. This is true even for programs that had captions when they were shown on TV. The result is that I and millions of other people who can't hear are being denied access yet again.

It was not that long ago that I can remember not having access to many regular TV programs. I remember when South Park first came out. Everyone said it had inappropriate language. Of course, this made me want to see the show even more. But it wasn't captioned. And I couldn't lip read the itty-bitty nonsensical mouths of the cartoon characters. So I had to depend on my hearing friends to tell me what they were saying.

Another example is MTV, music videos, also popular during my preteen years, but also rarely captioned. Being able to see these shows may sound trivial to you, but as a young adult, keeping up with the cultural experiences of my peers was very important. Whenever access was denied to me, I felt—and was—left behind.

In 1996, thanks to your work, Congress fixed all of this by passing a law requiring nearly all television shows to have captioning. This had a big impact on me. Captions allow me to be in sync with what is going on in the world. They give me the information I need, like the information about the upcoming election. They let me keep pace with current trends and maintain my independence. But now

that everything is moving to the Internet, I am feeling behind, just like generations of my family before me.

In conclusion, on behalf of millions of people with hearing, vision, and speech disabilities represented by COAT, I urge Congress not to leave people with disabilities behind as the new Internet and digital video programming technologies become available to the general public.

I ask you to pass this legislation that will continue protecting our ability to access the emerging video technologies. Thank you.

Mr. MARKEY. Thank you, Mr. Harvard, very much. And by the way, if there was such a thing as an Oscar for congressional testimony, you would be a nominee for this year. So we thank you.

So our next witness——

Mr. HARVARD. Thank you.

[The prepared statement of Mr. Harvard follows:]

WRITTEN TESTIMONY OF RUSSELL HARVARD

ON BEHALF OF
THE COALITION OF ORGANIZATIONS FOR ACCESSIBLE TECHNOLOGY (COAT)

Subcommittee on Telecommunications and the Internet
Committee on Energy and Commerce
U.S. House of Representatives

H.R. __, Draft Legislation Enhancing Access to Broadband Technology and Services for Persons with Disabilities

May 1, 2008

Chairman Markey, Ranking Member Stearns, and Members of the House Subcommittee on Telecommunications and the Internet, thank you for giving me the opportunity to appear before you today to discuss the need for communications access by people with disabilities. My name is Russell Harvard and I am an actor, recently sprouted in the film business and looking forward to growing in my field. I am proud to say I performed the role of Daniel Day Lewis's son in the double Oscar winning film, *There Will Be Blood*, and had the privilege of playing the villain in *CSI: New York* with my friend, Marlee Matlin. I also perform a strong thread of songs in American Sign Language. I am deaf, the third generation of deaf individuals in my family.

I am honored to offer my testimony today on behalf of the Coalition of Organizations for Accessible Technology (COAT), a coalition of nearly 200 national, regional, and community-based organizations dedicated to making sure that as our nation migrates from legacy telecommunications to more versatile and innovative digital communication technologies, people with disabilities will not be left behind.[1] Although this coalition is only a little more than a year old, its rapid growth and attraction to organizations across the nation demonstrates the urgency

[1] A list of COAT affiliate members supporting the COAT agenda can be found at http://www.coataccess.org.

of the issues being discussed at these hearings. COAT works on behalf of over 31 million individuals with hearing loss, 10 million individuals who are blind or who have vision loss, over 70,000 persons who are both deaf and blind, and millions of individuals with other disabilities who need accessible communications.[2]

I join all COAT affiliate members in being excited about the promises of new Internet Protocol and digital technologies. Like all consumers, we look forward to the benefits of technological advances. Unfortunately, history has shown that, all too often, people with disabilities have been left out or left behind as these advances have taken place. Typically, it has taken acts of Congress to put us on a level playing field with our non-disabled peers. For example, I can remember when our family needed a separate decoder box to receive and display captions on our television sets. Without a requirement for television sets to decode captions, television set manufacturers did not include this feature on their own. When our decoder box got too hot, the captions would flicker, making them hard to read. As a consequence, the family member who got to use the decoder box first was the only one who could really enjoy – and understand – his or her television program. What really sticks out in my mind is not being able to watch any programs shown just before *All My Children*. My step-mom kept me from watching any television for an hour before that show, so the decoder box would be cool enough to display steady captions for her favorite program!

I'm grateful that in 1990, Congress took care of this problem. In that year, you enacted the Television Decoder Circuitry Act, which required all televisions with screens at least thirteen inches in size, to receive and display closed captions. The Decoder Act made video

[2] Kochkin, S. MarkeTrak VII: Hearing Loss Population Tops 31 Million People, The Hearing Review, Vol. 12(7) July 2005, pp. 16-29.

programming technology *more* accessible for people with disabilities. Now we need to take another step forward and make it *equally* accessible.

At the outset, I want to say that the proposed draft of the "Twenty-first Century Communications and Video Accessibility Act" is a major step forward toward expanding communications protections for people with disabilities. Today I will address the various provisions in this proposal that concern access to video programming by people who are deaf or hard of hearing. I understand that my colleagues on this panel will address other provisions found in the proposal.

Ensuring Accessible Television Programming over the Internet

This Subcommittee is all too aware that our television environment is moving swiftly from analog to digital technology. In only 10 more months, the transition will be complete. I know that you have gone to great lengths to make sure that all Americans are aware of this major change in the way we watch television. I agree that this is an exciting time that holds out great promise for the viewing experience of most Americans. Not only is the digital picture clearer and – I am told – its sound crisper, but more and more, television programming is no longer tethered to what we have come to know as a "television set." Internet-based video programming services that offer television programs, movies, and live video streaming are proliferating at lightning speed. In fact, it seems like every time I watch a television show on my old fashioned television set, an announcer at the end of the show tells me that I can watch the show many more times with enhanced features, such as deleted scenes and interviews with actors, on the Internet. But for me, these promises of a wondrous new world of video programming are largely empty.

You see, only a handful of television shows available on the Internet have closed captioning. This is true, even when these very same programs were previously shown on

television with captions. Closed captions simply have not made their way to this new viewing medium. The result is that I, along with millions of other people who cannot hear, are denied access to hundreds, if not thousands, of hours of video programming.

It was not that long ago that I and others who are deaf or hard of hearing did not have access to many TV programs on regular television channels. For example, I remember when *South Park* came out and lots of talk circulated about the "inappropriate" language used in that program. Of course, this piqued my interest. My curiousity could not be satisfied, however, because *South Park* was not captioned and lipreading the animated characters with their itty bitty nonsensical mouths was impossible. The only way I could know what was going on was to ask some of my hearing friends what the show was about.

Being able to understand *South Park* cartoon characters may sound trivial to some people, but, as a young adult, keeping up with the cultural and social experiences of one's peers is very important. Whenever access is denied to me, I feel – and am – left behind. Another example of inaccessible programming in the past was MTV music videos, which were very popular during my pre-teen years. These, too, were rarely captioned. Although my step-sister was nice enough to write down or sign the lyrics, this did not afford me the independence that everyone else had, and I surely desired. Just imagine not being able to watch TV on your own, and having to ask a family member or friend to tell you what is being said.

But my generation is also lucky. Thanks to the work of this Subcommittee and others in Congress, in 1996, you passed a law requiring nearly all television shows to have captioning. That law went into full effect for new programs in January 2006 and, since January 2008, has required 75 percent of older television shows (shows first shown or exhibited prior to 1998) to have captions. Closed captioning has made a huge impact on the lives of every deaf or hard of

hearing person, including me. Captions allow me to be in sync with what is going on in the world. They let me watch television with my family and friends. They enable me to get the information I need to develop and share my political views on the presidential campaign. They let me keep pace with current trends and maintain my independence and sense of dignity.

But, it seems like just as soon as we finally have access to nearly all of the news, information, and entertainment on television, we now find that when we turn to such video programming on the Internet, we are again left behind, unable to understand what is going on. Because captioning of television shows on the Internet is not yet required by law, hardly any of these programs are captioned. Like the deaf generations of my family that came before me, I am again confronted with having to guess at what is being said.

Additionally, for me, not having the ability to watch video programming on the Internet is far more than just an annoyance; it affects my ability to compete in my profession. As an actor, it is a significant hardship not to be able to have access to all mediums of video programming. I am always looking to improve my skills: being able to re-watch the work of other actors is something that can help me immensely in my work. Not being able to do so makes technology regress for me as it progresses for everyone else. I am not alone in my frustration. When something as popular and important as Internet programming is not accessible to us, the reaction from the deaf and hard of hearing community is very strong. Imagine, if you will, hearing the collective groan of millions of people expressing their frustration as they see history repeating itself all over again.

To ensure equal access, we ask Congress to make clear that the captioning obligations that were passed in 1996 and apply to video programming distributors, also apply to their

programming distributed over the Internet.[3] Specifically, we want legislation to make sure that captions are available for the following types of Internet programming:

- Pre-produced video programming that was previously captioned for television viewing in compliance with Section 713 of the Communications Act.
- Live programming that must be captioned for television viewing in compliance with Section 713 of the Communications Act.
- New web-based video programming provided by, or generally considered comparable to programming provided by, a television broadcast station that is distributed and exhibited over the Internet for residential use. This category is not intended to cover user-generated content uploaded by private citizens, but rather to capture the same type of programming that video programming distributors would otherwise exhibit on analog or digital television channels.

Some of you may have questions about the extent to which captioning of Internet-based videos is technically feasible. While I am no expert on this issue, my understanding is that this is already being done today on a few Internet sites, such as the NBC/Fox Hulu video website, and in a large number of movies available from Apple's iTunes. In addition, I am told that there are a number of ways that content providers and distributors can convert their traditional television captions into captions for Internet-based distribution, or create and display original captions for online media.

Accessible Video Programming Equipment

[3] A video programming distributor is defined in the FCC's rules as "[a]ny television broadcast station licensed by the Commission and any multichannel video programming distributor as defined in §76.1000(e) of [Chapter 47], and any other distributor of video programming for residential reception that delivers such programming directly to the home and is subject to the jurisdiction of the Commission." 47 C.F.R. §79.1(a)(2). A "multichannel video programming distributor" is defined as "an entity engaged in the business of making available for purchase, by subscribers or customers, multiple channels of video programming. Such entities include, but are not limited to, a cable operator, a BRS/EBS provider, a direct broadcast satellite service, a television receive-only satellite program distributor, and a satellite master antenna television system operator, as well as buying groups or agents of all such entities." 47 C.F.R. §79.1000(e).

Expanding the captioning laws to the Internet will solve part of the problem being confronted by people with disabilities who want access to video programming, but there is still more work to do. It used to be that the majority of televisions ranged from 19 to 32 inches. So when Congress enacted the Decoder Circuitry Act of 1990, requiring all television sets with screens larger than thirteen inches to include decoder chips that could display captions, it was confident that the overwhelming majority (approximately 96 percent) of all television sets would be covered by the new law.[4]

But times and technology have changed – dramatically! Now my friends and colleagues are able to watch their favorite shows on their cell phones. They can download and playback sporting events on their MP3 players. They can store movies on their compact laptops. And phone companies and satellite radio services are now in the business of providing television programming! Once again, I and others who cannot hear are finding ourselves left out of this whirlwind of technological change. Although we can watch captioned television shows when we are in our own homes, when we are on the go, we are typically out of luck.

So we come to you, fifteen years after the Television Decoder Circuitry Act was enacted. Again, we thank you for passing this wonderful law, a law that truly changed my life, as well as the lives of millions of deaf and hard of hearing people who would otherwise not have had access to television programming for the last decade and a half. We ask that you now take this law to its next level. The thirteen-inch screen limitation has worn out its welcome. With it now

[4] In 1989, TV Digest reported that 96 percent of new televisions had screens that were thirteen inches or larger. 12 TV Digest (Elec. Indus. Ass'n, September. 11, 1989); See also DuBow, "The Television Decoder Circuitry Act-TV For All," Temple Law Review 64, No. 2 (1991) and Strauss, *A New Civil Right, Telecommunications Equality for Deaf and Hard of Hearing American* (Washington, D.C.: Gallaudet Press, 2006), p. 230, for more on the thirteen-inch screen size minimum.

being possible to display television programming on screens of all sizes, we urge you to get rid of that restriction and extend the captioning circuitry requirements to *all* video devices that receive or display video programming, including devices that can receive or display video programming carried over the Internet. In this modern digital era, we all know that devices that receive video programming can be as large as a living room wall or as small as a handheld MP3 player. All of these devices need to have the capacity to display closed captioning.

Accessible User Interfaces

The last point I want to make has to do with my ability – or should I say my inability – to figure out how to activate captions on television sets, even when captions are provided. In this regard, I ask the members of this Subcommittee to try something out. The next time you are in a hotel and, after a long day, sit back to watch the news or enjoy a movie on a brand new digital television, try to turn on the captions. The first thing you will probably do is look at the remote control. If you are lucky, there will be a caption control button there, and that will end your search. More likely, what you will find are buttons for volume control, buttons for channel selection, and buttons to perform a host of other functions that may or may not make any sense to you. Chances are that you will not find a caption control button.

Your next strategy may be to turn on the television's on-screen menu and try to find the captions that way. I wish you the best of luck as you try to navigate the maze of complicated choices. If this attempt fails as well (which it has for me on many occasions), your third option will be to call the front desk and have them send up the hotel engineer. You can then laugh to yourself as you watch him go through the same steps you did. I cannot begin to tell you how often this scene is repeated across America. In the past, the problem of not being able to access closed captions was largely limited to televisions located outside the home. People generally

were able to figure out how to turn on captions on televisions that they purchased because they had the manuals to do so. But now, even finding the captioning features on digital and HDTVs purchased for use inside the home has become a considerable chore, and sometimes a virtual impossibility.

The shame of it is that, in the year 2000, the FCC issued wonderful rules requiring enhanced captions on all digital televisions. Unlike captioning on analog television sets, which only appear as white letters on a black background, digital televisions must provide viewers with the ability to control caption fonts, sizes, colors and opacity. The FCC created these rules so that people who can not hear can reap some of the fantastic benefits that digital television has to offer. But as I have explained, figuring out a way to get access to these captioning features is not so easy – in fact, it is typically quite difficult. My guess is that most deaf and hard of hearing people don't even know that these captioning options exist for them.

The proposed legislation will fix this. It will require devices that display video programming to provide a conspicuous means of accessing closed captioning (along with video description for people who are blind or have vision loss). This can be achieved by adding a button for captioning on the remote controls of video programming devices and by enabling viewers to control captioning features on the top tier of the equipment's on-screen menu. Captions enable us to understand the content of a program, the same way that the sound track enables people who can hear to follow a program's plot. It should be as easy for people who are deaf and hard of hearing to find and control captions as it is for hearing people to control the volume and other audio features on a TV set.

Conclusion

In conclusion, on behalf of millions of Americans with hearing, vision and speech disabilities, we call upon Congress not to leave people with disabilities behind as new Internet and digital video programming technologies become available to the general public. I am a big fan of technology: it empowers me to do things I otherwise could not do and allows me to access the information I need to be successful – both in my profession and as a citizen who actively participates in our nation's civic affairs. On behalf of the Coalition of Organizations for Accessible Technology, I thank the Subcommittee for this opportunity to share our concerns and urge you to introduce and pass legislation that will safeguard continued access to emerging communications and video programming technologies.

SUMMARY OF
TESTIMONY OF RUSSELL HARVARD

ON BEHALF OF
THE COALITION OF ORGANIZATIONS FOR ACCESSIBLE TECHNOLOGY

Subcommittee on Telecommunications and the Internet
Committee on Energy & Commerce
U.S. House of Representatives

H.R. _,Draft Legislation Enhancing Access to Broadband Technology and Services for Persons with Disabilities

May 1, 2008

Congress must act to ensure that people with disabilities – including the rapidly growing population of senior citizens who have hearing loss – are not left behind as our nation's communications and video programming migrate to new and innovative Internet-based and digital technologies. Like all consumers with disabilities, I look forward to the benefits of technological advances – not only to enhance my opportunities for employment, civic participation, and entertainment, but to give me the tools I need to maintain my independence. Unfortunately, without clear directives from Congress, history shows that companies are often not willing to incorporate access features on their own. I know firsthand – I am already unable to use many of the remarkable Internet-based technologies that my friends and colleagues can enjoy.

The draft legislation before you – the "Twenty-first Century Communications and Video Accessibility Act" – goes a long way toward ensuring the protections that I and others need to guarantee our continued access to communications and video products and services. My testimony focuses on the following proposals contained in this draft that are designed to ensure access to video programming:

- Application of the Communications Act's captioning obligations to video programming distributors that distribute their programming on the Internet.

- Elimination of the Television Decoder Circuitry Act's 13-inch screen size restriction, so that the wide variety of new high-tech devices that can receive, download or display video programming – including MP3 players, PDAs, cell phones, and DVRs – will receive and display closed captions.

- A requirement for video programming equipment to provide a button on the remote control for activating closed captions and the ability to control enhanced digital captioning features via the top tier of the equipment's on-screen menu.

Mr. MARKEY. Dane Snowden is the Vice President of External and State Affairs for CTIA, The Wireless Association. Prior to his work at CTIA, Dane served as the Chief of the Consumer and Government Affairs Bureau. As Bureau Chief, he was in charge of the FCC's policy concerning telecommunications access for people with disabilities. So he brings both his experience at the FCC and the wireless industry to his testimony here today. We welcome you, sir. Whenever you are ready, please begin.

STATEMENT OF K. DANE SNOWDEN, VICE PRESIDENT, EXTERNAL AND STATE AFFAIRS, CTIA, THE WIRELESS ASSOCIATION

Mr. SNOWDEN. Thank you. Good morning, Mr. Chairman, Ranking Member Stearns, and members of the subcommittee. As you just heard, my name is Dane Snowden, and I am the Vice President of External and State Affairs for CTIA, The Wireless Association. Thank you for this opportunity to share with you the views of CTIA and our member companies on the staff's discussion draft before you today.

It is nice to be back before this committee, albeit as an industry witness instead of as the Chief of the FCC's Consumer and Government Affairs Bureau. Today I want to share with you a sample of the efforts our industry has undertaken to improve the accessibility of innovative communications technologies for the disability community.

Since Congress amended the Communications Act with Section 255, the wireless industry has made great strides to make our products and services accessible to all of our customers. Today's wireless products and services incorporate many accessibility features that help empower consumers with disabilities. For example, for blind or low-vision consumers, there are cell phones that use voice recognition. For those who are deaf or have speech disabilities, there are TTY-compatible wireless phones, and consumers who are hard of hearing benefit from hearing-aid compliant wireless phones.

The development of these features for use by consumers with disabilities also benefits consumers without disabilities. And that helps our members achieve the ultimate goal: to better serve every American who chooses to participate in the wireless experience.

The wireless industry has a proactive and proven commitment to providing products and services to, and collaborating with, the disability community. Our commitment to innovation in this space is ongoing as we collaboratively work with the disability community through the U.S. Access Board TEITAC process, the ATIS process, the FCC HAC process, and the government-industry and standard-setting bodies.

The current regulatory framework has created the flexibility and certainty for the wireless industry to increase access to wireless services and products. This framework should be allowed to continue, and by doing so, access to current and future technologies will flourish without being subject to well-intended but potentially inflexible regulation.

We commend the Committee's efforts to review and ensure the disability community has access to emerging communications capa-

bilities, and we have several suggestions for how the current discussion draft could be improved.

First, we believe that the readily achievable standard should govern any new legislation. The success of the wireless industry in making communications products and services accessible to those with a variety of disabilities was due in no small measure to the readily achievable standard in Section 255, which allows service providers and manufacturers the needed flexibility to incorporate accessibility design and functionality in our rapidly evolving telecom products and services. Applying the ADA undue burden standard, which was originally enacted to apply to permanent buildings and other structures, would be problematic in an environment where products have a short life cycle and technologies are continuously evolving.

Today consumers have access to mobile phones with keys that are easily identifiable by touch, keypad shortcuts like one-touch dialing, voice commands, and text-to-speech capabilities. These advances were developed using the readily achievable standard, which appropriately balances the need to foster innovation and industry's commitment to meet the accessibility needs of our customers.

Second, CTIA believes that the legislation should not be enforced by private litigation. The FCC is authorized to employ its full range of sanctions and remedies to enforce the accessibility requirements. These sanctions are and continue to be deterrents for companies that do not comply or comply with Section 255.

Additionally, the FCC is better suited than the courts to resolve any technical issues arising from noncompliance. Regardless of the complaint volume, the FCC's existing complaint process is also fully capable and committed to addressing any alleged failure to provide services and equipment that are accessible.

Third, any new legislation should not impose new reporting requirements on either service providers or manufacturers. And finally, we hope this committee will take under consideration that if the wireless industry moves to an open access model, wireless users will increasingly obtain services and applications from third parties over whom industry will have little or no control.

Any new requirements must take into account the wireless industry's evolution to an open access regime. The wireless industry is committed to making its products and services accessible. Doing so is the right thing to do, and it is good business. We are committed to ensuring that every American is empowered to participate in the wireless experience, and we thank the subcommittee for its attention to accessibility issues.

We also encourage joining Chairman Markey—encourage all members of the staff to attend the Industry Tech Fair on May 16, to see many of the products that we have developed. On behalf of CTIA, I thank you for the opportunity to speak and look forward to answering any of your questions.

Mr. MARKEY. Thank you, Mr. Snowden, very much.

[The prepared statement of Mr. Snowden follows:]

TESTIMONY OF
K. DANE SNOWDEN
VICE PRESIDENT, EXTERNAL AND STATE AFFAIRS
CTIA – THE WIRELESS ASSOCIATION®

BEFORE THE HOUSE
SUBCOMMITTEE ON TELECOMMUNICATIONS AND
THE INTERNET

May 1, 2008

Good morning, Chairman Markey, Ranking Member Stearns and members of the Subcommittee. My name is Dane Snowden, and I am Vice President of External and State Affairs for CTIA – The Wireless Association®. Thank you for affording me this opportunity to share with you the views of CTIA and our member companies on the staff discussion draft Twenty-first Century Communications and Video Accessibility Act of 2008.

Prior to joining CTIA, I was Chief of the Federal Communication Commission's Consumer & Government Affairs Bureau (CGB) from 2001 to 2005. As CGB Chief, I directed policies such as Telecommunications Access for People with Disabilities, Telemarketing (Do-Not-Call Registry), and Wireless Spam. As CTIA's VP of External and State Affairs, I work with key consumer groups, including the disability community and senior citizens to facilitate open lines of communication with the wireless industry and collaborate on key issues. Additionally, I am currently a member of the Advisory Board of the Rehabilitation Engineering Research Center on Mobile Wireless Technology for Persons with Disabilities (Wireless RERC).

I want to share with you a sample of the efforts our industry has, and is making, to improve the accessibility of innovative communications technologies to the disability

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community. I hope to provide the Subcommittee with a better understanding as to why this well-intentioned legislation, as currently drafted, may not achieve its intended purpose.

I. THE WIRELESS INDUSTRY IS AND WILL CONTINUE TO PROVIDE ACCESS TO OUR CUSTOMERS WITH DISABILITIES.

Today, CTIA member companies serve more than 255 million consumers, carry more than 1 trillion minutes of use on their networks every year, and offer access to a wide variety of wireless telecommunications devices and services. In fact, since 1996 when Congress amended the Communications Act with Section 255, the wireless industry has taken great strides to make our products and services more accessible to our customers with disabilities. These new products and services that incorporate accessibility features have helped to further empower consumers with disabilities as they work, transact personal business, and keep in touch with family and friends.

Today, there are cell phones that use voice recognition for dialing and menu selection and new software will even "read out" or magnify what is on the display screen – making the device much easier to use by customers who are blind or have low vision. For customers who are deaf or have speech disabilities, all wireless phones are TTY compatible. Customers who are hard of hearing benefit from wireless phones being compatible with hearing aid t-coils and the lowering of radio frequency interference levels for hearing aid users. Consumers with mobility limitations benefit from the ability to answer the phone hands-free, use the speaker phone, and use the voice recognition capabilities for dialing and menu selection. And consumers with cognitive disabilities can benefit from many cell phones that provide prompts to help users through the process of menu selection, or offer picture Caller ID or use of symbols / icons for cell phone functions instead of text.

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We are also finding that many of the features that make our products easier to use by people with disabilities also make them easier to use by people without disabilities. Features such as larger font size, vibrating alerts, backlit keys and display screens, clearer contrasts, ring tones with different frequencies, text messaging, as well as many other features that are making our products and services easier to use by all of our customers.

Industry Initiatives

CTIA and its member companies believe that all Americans should have access to wireless communications, and the industry is committed to providing the disability community with the most advanced technologies. The wireless industry has a proactive and proven commitment to providing products and services to and collaborating with the disability community without regulatory intervention. For example, Microsoft recently announced that "Accessibility" officially became part of Microsoft's Trustworthy Computing organization (TWC) as part of the Business Practice pillar that also includes Privacy, Security and Reliability. In addition, Motorola Smart Phones and HP Pocket PCs were engineered so that screen readers and magnifiers that are compatible with Microsoft's Windows Operating System will work on these devices. Finally, CTIA carrier members provide information about their accessible devices and services directly on their websites.[1] Many of these and other examples from our member companies can be found on CTIA's *www.AccessWireless.org* website.

We also continue to work collaboratively with the disability community to ensure that they have access to a number of telecommunications services and devices through the

[1] *See*, AT&T Wireless, http://www.wireless.att.com/about/disability-resources/hearing-aid-compatibility.jsp, T-Mobile, http://www.t-mobile.com/Company/Community.aspx?tp=Abt_Tab_Safety&tsp=Abt_Sub_TTYPolicy, and Verizon Wireless, http://aboutus.vzw.com/accessibility/resources.html (last visited April 28, 2008).

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Alliance for Telecommunications Industry Solutions (ATIS)[2] Hearing Aid Compatibility Incubator process. In fact, after CTIA and the disability community worked together to advise the FCC on Hearing Aid Compatibility (HAC) requirements, consumers who use hearing aids are now offered their choice of high and low end wireless devices and services at prices that fit their lifestyle.

Additionally, representatives from four industry associations and eleven Information Technology companies recently completed a two year process of working alongside our disability community colleagues, standard-setting bodies in the U.S. and abroad, and government agencies to come up with solutions to meet many of the needs outlined in the proposed legislation.[3] The Telecommunications, Electronic, and Information Technology Advisory Committee (TEITAC) presented its final report, as well as 11 TEITAC member alternate reports, to the U.S. Access Board on April 3, 2008, which can be found at *http://www.access-board.gov/sec508/update-index.htm*.

These collaborative processes have proven effective at addressing the fast-moving, innovative and ever-changing aspects of our industry with careful attention on balancing

[2] ATIS is a United States based body that is committed to rapidly developing and promoting technical and operations standards for the communications and related information technologies industry worldwide using a pragmatic, flexible and open approach. ATIS prioritizes the industry's most pressing, technical and operational issues, and creates interoperable, implementable, end to end solutions -- standards when the industry needs them and where they need them.

[3] TEITAC industry members included CTIA — The Wireless Association, Information Technology Association of America, Information Technology Industry Council, Telecommunications Industry Association, Adobe Systems, Inc., AOL, LLC, Apple, Inc., AT&T, Avaya, Inc., Canon USA, Inc., Dell, Inc., IBM, Microsoft Corporation, Panasonic Corporation of North America, and Sun Microsystems, Inc. TEITAC disability representative members included American Association of People with Disabilities, American Council of the Blind, American Foundation for the Blind , Assistive Technology Industry Association, Communication Service for the Deaf , Hearing Loss Association of America , National Center on Disability and Access to Education, National Federation of the Blind, Paralyzed Veterans of America, Trace Research and Development Center, Usability Professionals' Association, and WGBH National Center for Accessible Media. A complete list can be found at http://www.access-board.gov/sec508/update-index.htm (last visited April 27, 2008).

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the needs of consumers with disabilities. CTIA and its members are committed to continuing these and future collaborative initiatives in partnership with the disability community.

II. COMMUNICATIONS ACCESS: *DEFINITIONS, READILY ACHIEVABLE, REMEDIES and REPORTING*

We applaud the Committee's efforts to review and ensure the disability community has access to emerging communications capabilities. Consistent with Section 255 of the Communications Act, which establishes access requirements for telecommunications services and equipment, we believe that the same "readily achievable" standard should be utilized in any new legislation; that the legislation should not be enforced by private litigation; and that such legislation should not impose new reporting requirements on either service providers or manufacturers. As currently drafted, the proposed legislation would unnecessarily burden the industry with little countervailing benefit to the disability community.

Definitions

Our industry has a proven track record of innovation under the current Section 255 framework, but we are concerned that the essentially open-ended mandates in the current draft could actually threaten future advancement of new technologies by inhibiting the current cooperative activities. The current regulatory framework has created the flexibility and certainty for the wireless industry to increase access to wireless services and products. This framework should be allowed to continue and, by doing so, access to current and future technologies will flourish without being subject to what may soon be outdated statutory and regulatory models.

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Additionally, the current draft fails to distinguish between manufacturers, service providers and third party application or content providers. As service providers move to an open access model, wireless users will increasingly obtain services and applications from third parties over whom wireless providers and manufacturers *will have little or no control*. Service providers and manufacturers should not have to bear accessibility compliance responsibility for these third party services and applications. Any new requirements must take account of the wireless industry's evolution to an open access regime.

Undue Burden v. Readily Achievable Standards

I previously described the wireless industry's compliance and success in meeting the original Congressional policy directive, embodied in Section 255, to make communications products and services accessible to those with a variety of disabilities. That was due in no small measure to the fact that Section 255's "readily achievable" standard affords manufacturers and service providers the needed flexibility to incorporate accessibility design and functionality into rapidly evolving telecommunications products and services. As currently drafted, however, the legislation requires manufacturers and service providers to comply with an "undue burden" standard. We believe that standard is inappropriate to govern accessibility to communications services and equipment.

The Americans with Disabilities Act (ADA) "undue burden" standard was originally enacted to apply to permanent buildings and other structures, and is a more stringent standard that has never been used to measure commercial, consumer product development where the product has a short life cycle and technologies are continuously evolving. This "undue burden" standard is more rigorous than the current Section 255 "readily achievable" standard and would introduce uncertainty and additional cost into the design of new products where

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no specific or demonstrated concerns have been identified. Alternatively, maintaining the "readily achievable" standard enables manufacturers and consumers to benefit from the design processes and procedures developed to implement Section 255 and now embedded in industry practices. A change to the current standard may result in a disruption to the planning and design process that could undermine manufacturers' efforts to bring accessible products to market in a timely manner. "Readily achievable" also benefits consumers because the products and services that are readily achievable are always changing as technology evolves and costs for features that were once rare and expensive, become standard and affordable in later generations.

It is important to note that there has been demonstrable progress in delivering a wide variety of products and services with substantially improved accessibility features to consumers. In addition to the examples I mentioned above, consumers now have access to mobile phones with keys that are easily identifiable by touch, keypad shortcuts like one-touch dialing, audible battery and signal strength indicators, voice dialing, voice recording, voice commands, different tones for power on and power off, text-to-speech capabilities, speech recognition capabilities, visual display of text, compatibility with hearing aids, speaker phone with voice-activated answering and much more. Most of the foregoing accessibility advancements were developed using the "readily achievable" standard, which appropriately balances the need to foster innovation and industry's commitment to meet the accessibility needs of consumers.

Remedies

With respect to any proposed remedies, CTIA does not believe this legislation should encourage enforcement by means of private litigation. In its Section 255 Report and Order, the FCC indicated that it can employ its full range of sanctions and remedies to enforce the

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accessibility requirements, and it rejected claims that Section 255's preclusion of private rights of action deprived the Commission of any authority to entertain requests for damages on behalf of individual complainants.[4] The FCC's sanctions are and continue to be deterrents for companies that do not comply with Section 255. Additionally, the FCC is more appropriately suited than Federal judges to resolve any technical issues arising from non-compliance with Section 255. Finally, litigation costs resulting from private rights of action lawsuits would undoubtedly divert attention and resources from investment and innovation. Taken collectively, CTIA believes that the FCC's clear authority in this area, the risk of inconsistent judicial interpretation, and the potential diversion of resources counsel against authorization of private enforcement actions as a remedy to enforce the proposed legislation.

Reporting Requirements and Consumer Complaints

As Chief of CGB, I noticed that complaints about wireless devices and services from consumers with disabilities were few and not in the top categories of complaints against the wireless industry. But regardless of the complaint volume, the FCC always reviews the complaint trends – big or small. The FCC's existing complaint process is fully capable and committed to addressing any alleged failure to provide services and equipment that are accessible and ensure service providers respond promptly. Therefore, new reporting requirements should not be imposed on service providers or equipment manufacturers.

Alternatively, we support the FCC's suggestion in its Section 255 VoIP Order that an advisory committee be established to address accessibility concerns related to VoIP. We also support the draft's proposal to establish a clearinghouse of information on availability of accessible products and services. This would not only provide a great educational value

[4] FCC Rules and Policies Implementing Section 255 of the Telecommunications Act of 1996 and Section 251(a)(2) of the Communications Act of 1934, Report & Order, para. 113 & 115 (July 14, 1999) (FCC Section 255 R&O).

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to the disability community, but provide an account of the accessible technology marketplace to determine whether there is market failure.

III. VIDEO SERVICES: *CLOSED CAPTIONING and VIDEO SERVICE CAPABILITIES*

Closed captioning of video programming benefits all consumers, but as currently drafted, the legislation requires an entirely new class of multifunctional products, such as wireless handsets and devices, which receive and display video from many different sources to adopt closed captioning solutions. Closed captioning is a system that relies on industry developed standards for transmission and reception/decoding of captions and imposing burdensome requirements before standards are adopted would slow development of these products and hinder innovation. Additionally, the feasibility of having closed captioning on small screen devices may be impractical from a user perspective.

Currently, there are a number of ongoing industry initiatives to address closed captioning of web-based content and new video devices, but other standards need to be developed and adopted for broadband and mobile video services to ensure accessibility. Given the multitude of video programming sources consumers can now receive, we believe that the best course is to give these industry initiatives an opportunity to address closed captioning over new platforms before legislating in this area.

IV. CONCLUSION

The wireless industry serves more than 255 million consumers who use our products and services daily for safety, convenience and enjoyment. We often take the intricacies of wireless services for granted, but the work of hundreds of thousands of dedicated men and women every day is necessary to build, maintain, and expand a robust and secure wireless

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industry. CTIA commends you, Chairman Markey, for encouraging the industry to provide consumers with disabilities greater access to innovative products and services. We look forward to working with the Committee to craft policies that serve the needs of people with disabilities and ensure the continued success of Section 255 for all Americans. We welcome any questions you may have.

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Wireless devices increasingly helping people with disabilities

Published: Sunday, 24-Feb-2006

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Mirroring a trend among the general public, an increasing number of people with disabilities regularly use wireless technologies, including cell phones - and find them easier to use.

But a number of people with disabilities cite a need for improved functionality of wireless devices, such as a feature to enable service dogs to call for help in an emergency, according to the initial results of a survey funded by the U.S. Department of Education's National Institute on Disability and Rehabilitation Research (NIDRR).

Wireless device ownership increased 13 percent - from 72 to 85 percent - among people with disabilities from the first generation of the survey of user needs - conducted from 2001 to 2006 - and the current survey, which began in April 2007. Also, more than three-fourths of respondents last year reported that their wireless devices are easy or very easy to use, compared to only half of those who responded to the earlier survey. Still, 73 percent said they likely would change wireless service providers, if necessary, to get additional features that enhance accessibility.

"The data these consumers share through our research helps our wireless industry partners meet customers' needs and also helps identify applications useful to people without disabilities," said survey project director Jim Mueller of the Wireless Rehabilitation Engineering Research Center (RERC), a collaboration between Atlanta-based Shepherd Center and the Georgia Institute of Technology. "We are not encouraging the wireless companies to make special products. We want products that will work for everyone."

The RERC, which received its second, multi-year grant from NIDRR in 2006, promotes equitable access to wireless technologies and encourages adoption of universal design -design that benefits users of all ages and abilities - in future generations of wireless devices and applications.

The 1,208 people who completed the RERC survey in 2007 are representative of a large portion of the estimated 40 million Americans with disabilities, researchers noted. They compared the demographics of survey respondents to the U.S. Census and noted that 77 percent of respondents are 25-61 years of age; 5 percent are younger; 18 percent are older.

Researchers are comparing and contrasting the initial results from the current survey to the RERC's previous user-needs survey of 1,200 people. Also, they are tracking trends among 165 people who have participated in both studies. In addition, researchers are comparing their results to findings reported by other wireless industry groups in 2007.

Here are some highlights from the analysis:

- Comparing the earlier survey results to the current responses, researchers found that respondents who use their wireless devices every day increased from 40 to 65 percent. Those who consider their wireless devices "very important" increased from 60 to 77 percent.

- Explaining why wireless devices are important to them, survey participants cited convenience and a sense of security - much like the general population. But they also noted that wireless devices often serve as assistive technologies. For example, one respondent noted, "The camera helps me remember things." Another participant reported that with the texting feature, "I can communicate with hearing people, like hearing people use cell phones."
- Among respondents to the survey last year, 77 percent said they are satisfied, very satisfied or extremely satisfied with their current wireless provider.
- About 68 percent of 2007 survey respondents said they are satisfied, very satisfied or extremely satisfied with their present wireless devices.
- The most important wireless functions cited by survey participants are: voice communication, 78 percent; Enhanced 911, 45 percent; text messaging, 43 percent; e-mail, 41 percent; and Internet access, 35 percent.
- The most important handset features to these users are: long battery life, 63 percent; durability and toughness, 61 percent; low cost, 57 percent; and simple operation, 56 percent.
- Survey respondents suggested some additional features they would like to have in a wireless device: "feature to enable service dog to call for help in emergency"; "ability to switch to voice carry-over during call (in case voice becomes unintelligible or environmental noise is too great)"; and "[ability to] scan and speak medication labels."
- Survey respondents also commented on ways to make wireless devices easier to use. Their comments related to: incompatibility with assistive technologies, especially hearing aids or cochlear implants, design of the handset, including their difficulties holding it, seeing the display, and manipulating the controls.

People with disabilities may participate through 2011 in the RERC survey, which is available online at http://www.wirelessrerc.org. The survey is also available by phone and in print. For more information, call 800-582-6360, send email to rerc@wirelessrerc.org or send correspondence via regular mail to:

Wireless RERC Research Coordinator
Crawford Research Institute
Shepherd Center
2020 Peachtree Road NW
Atlanta, GA 30309.

About Shepherd Center
Shepherd Center is a private, not-for-profit hospital devoted to the medical care and rehabilitation of people with spinal cord injury and disease, acquired brain injury, multiple sclerosis and other neuromuscular problems. Each year Shepherd Center admits more than 750 patients and conducts thousands of outpatient clinic visits. For more information, visit Shepherd Center online at http://www.shepherd.org.

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Cell Phone Can Read Documents for Blind

January 28, 2008 - 12:18am
By ALEX DOMINGUEZ
Associated Press Writer

BALTIMORE (AP) - Chris Danielsen fidgets with the cell phone, holding it over a $20 bill.

"Detecting orientation, processing U.S. currency image," the phone says in a flat monotone before Danielsen snaps a photo. A few seconds later, the phone says, "Twenty dollars."

Danielsen, a spokesman for the National Federation of the Blind, is holding the next generation of computerized aids for the blind and visually impaired.

The Nokia cell phone is loaded with software that turns text on photographed documents into speech. In addition to telling whether a bill is worth $1, $5, $10 or $20, it also allows users to read anything that is photographed, whether it's a restaurant menu, a phone book or a fax.

While the technology is not new, the NFB and the software's developer say the cell phone is the first to incorporate the text-to-speech ability.

"We've had reading devices before," Danielsen said, noting similar software is already available in a larger handheld reader housed in a personal digital assistant. Companies such as Code Factory SL, Dolphin Computer Access Ltd. and Nuance Communications Inc. also provide software that allows the blind to use cell phones and PDAs.

Inexpensive hand-held scanners such as WizCom Technologies Ltd.'s SuperPen can scan limited amounts of text, read it aloud and even translate from other languages.

However, the $2,100 NFB device combines all of those functions in one smart phone, said James Gashel, vice president of business development for K-NFB Reading Technology Inc., which is marketing the phone as a joint venture between the federation and software developer Ray Kurzweil.

"It is the next step, but this is a huge leap," Gashel, who is blind, said in a telephone interview. "I'm talking to you on the device I also use to read things. I can put it in my pocket and at the touch of a button, in 20 seconds, be reading something I need to read in print."

Ray Kurzweil, who developed the first device that could convert text into audio in the 1970s and the current NFB device, said portability is only the first step. Future versions of the device will recognize faces, identify rooms and translate text from other languages for the blind and the sighted.

The inventor plans to begin marketing the cell phone in February through K-NFB Reading Technology. The software will cost $1,595 and the cell phone is expected to cost about $500, Kurzweil said.

Dave Doermann, president of College Park-based Applied Media Analysis said his company is working on similar software for smart phones that could be used by the military for translation and by the visually impaired.

"We don't anticipate ours being that expensive, but unfortunately we're not quite to the release yet," said Doermann, who is also co-director of the University of Maryland's Laboratory for Language and Media Processing.

Doermann said the company, which has received funding from the Department of Defense and the National Eye Institute, hopes to have its software ready in the next 12 to 18 months.

Kurzweil's device uses speech software provided by Nuance, said Chris Strammiello, the director of product management at Nuance, who said the company has also developed a prototype reader that uses the Internet to access more powerful server-side computers.

"As you can harness the power of remote environments and do that so quickly with the Web technologies, it gives a lot more capability, flexibility and options to the way you solve these type of problems," Strammiello said.

There are about 10 million blind and visually impaired people in the U.S., a number that is expected to double in the next 30 years as baby boomers age.

Kurzweil said those with vision problems are not the only ones expected to benefit from the technology. Dyslexics, for example, are expected to be among the users of the current device because of its ability to highlight each word as it's read aloud, helping them cope with their disability, which affects the ability to read. The highlighting function can also help them improve their reading skills, he said.

"What's new here is both blind people and kids can do this with a device that fits in their shirt pocket," Kurzweil said.

Marc Maurer, president of the National Federation of the Blind, said the device and its PDA predecessor are a "form of hand-held vision" that will make the visual environment "much more readily available to the blind."

—

National Federation of the Blind: http://www.nfb.org/

K-NFB Reading Technology Inc.: http://www.knfbreader.com/

Kurzweil Technologies Inc.: http://www.kurzweiltech.com/ktihome.html

Applied Media Analysis: http://appliedmediaanalysis.com/

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updated 11:46 a.m. EST, Fri January 25, 2008

Double amputee walks again due to Bluetooth

STORY HIGHLIGHTS

- 2 wounded Iraq veterans are using prosthetics outfitted with Bluetooth
- Their artificial legs communicate via Bluetooth to coordinate movements
- Both vets are testing the legs for what could become more widespread use

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READ VIDEO

From Larry Shaughnessy
CNN

WASHINGTON (CNN) -- Marine Lance Cpl. Joshua Bleill lost both his legs above the knees when a bomb exploded under his Humvee while on patrol in Iraq on October 15, 2006. He has 32 pins in his hip and a 5-inch screw holding his pelvis together.

Joshua Bleill, pictured here with his girlfriend, is walking again with the aid of prosthetics outfitted with Bluetooth.

Now, he's starting to walk again with the help of prosthetic legs outfitted with Bluetooth technology more commonly associated with hands-free cell phones.

"They're the latest and greatest," Bleill said, referring to his groundbreaking artificial legs.

Bleill, 30, is one of two Iraq war veterans, both double leg amputees, to use the Bluetooth prosthetics. Computer chips in each leg send signals to motors in the artificial joints so the knees and ankles move in a coordinated fashion.

Bleill's set of prosthetics have Bluetooth receivers strapped to the ankle area. The Bluetooth device on each leg tells the other leg what it's doing, how it's moving, whether walking, standing or climbing steps, for example.

"They mimic each other, so for stride length, for amount of force coming up, going uphill, downhill and such, they can vary speed and then to stop them again," Bleill told CNN from Walter Reed Army Medical Center, where he's undergoing rehab.

"I will put resistance with my own thigh muscles to slow them down, so I can stop walking, which is always nice." Watch Bleill demonstrate his legs »

Bluetooth is the name for short-range wireless technology that can connect computers to printers, MP3 players to speakers and -- perhaps the most well-known use -- cell phones to ear pieces.

Older models of computer-controlled legs have to be "programmed" via wire by laptop computers before the amputee can use them. Those legs required more movement from the amputee's remaining thigh muscle to generate motion in the prosthetic leg.

Because of built-in motors, the Bluetooth legs allow Bleill to walk longer before he tires.

"We've compared walking several laps in both sets of legs and one, your legs come out burning and tired and these, you know, you sometimes are not even breaking a sweat yet."

Bleill says the technology also means he spends less time in a wheelchair. The Marine uses canes to walk with them. He's hoping to get to the point where he can use one cane regularly, and eventually lose the cane altogether.

"I can walk without canes, but it's not real pretty," he said.

This new generation of prosthetic technology was originally conceived to help amputees who had lost only one leg. But it's working for Bleill and Army Lt.Col. Gregory Gadson, who is also using the Bluetooth devices in his legs.

What they are experiencing will help future amputees.

"We are the first ever to try this, so it's learning day-to-day. The [prosthetics] company comes down on a regular basis and checks in with us," Bleill said.

Gadson, a former linebacker at West Point, said they are breaking new ground for amputees. "I think we are kind of pioneering and hopefully blazing a trail for others to try the technology also," he said.

But the technology is not without some problems.

"It's only going to react to how I move," Bleill said. "Unfortunately, sometimes I don't know those reactions, I don't know what I'm doing to make it react. So sometimes the leg kicks harder than I want it to, or farther, and then I start perpetuating, and I start moving faster than I really want to."

Aside from the Bluetooth technology, Bleill's legs have one other thing in common with a cell phone. They need to be charged overnight. Currently, there are no spare batteries available.

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What are his long-range plans?

He just wants to make it back to his home state of Indiana and work for a charity or even help the NFL's Indianapolis Colts.

"They do a lot for the community," he said.

He added he simply wants "to give back."

"To, you know, just carry on a normal life. Go home, see my girlfriend, see my family." E-mail to a friend

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Q. Does the information in this brochure apply to cochlear implants also?

A. Cochlear implants are not regulated by the FCC and therefore are not rated. However, devices rated for HAC may make it more likely that a cochlear implant user will be able to use a cell phone with minimal interference either on the M or T setting. The same rule of thumb applies though – try before you buy.

Try before you buy.

It's best to try several phones before making your purchase to find the best match with your hearing aid.

Q. Are devices rated for HAC more expensive than devices without hearing aid compatibility?

A. No, the range of features and functions of wireless devices will impact the price, but hearing aid compatibility will not. Service provider owned and operated stores will offer a range of devices with varying features and prices.

Q. I already have a wireless device. May I trade it in for a hearing aid compatible device?

A. You will need to consult with your service provider.

Q. What if I cannot find a wireless device that works with my hearing aid?

A. You can check with your hearing healthcare professional to determine if there is a hearing aid option for you that may work better with wireless devices. Some telecoil users may find that accessories such as neckloops may further assist with their use of wireless devices.

Q. How can I be "hands free" while using my wireless device?

A. Many states now require "hands free" driving while using wireless devices. If you use a telecoil, you may be able to use a neckloop. If you use the microphone mode in your hearing aid, you may be able to use the speaker phone function available on some wireless devices. If there is a Bluetooth accessory for your hearing aid, it may be able to work with Bluetooth enabled wireless devices. Remember safety first while driving.

Resources for Consumers

Many people and organizations contribute to ensuring accessible communication is equally available for all individuals with disabilities, including consumers who have a hearing loss.

For more information

Visit **http://www.accesswireless.org** or **http://www.phonescoop.com** (show all options).

This brochure is courtesy of the
CTIA–The Wireless Association®
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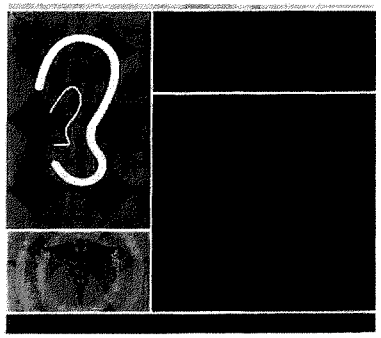

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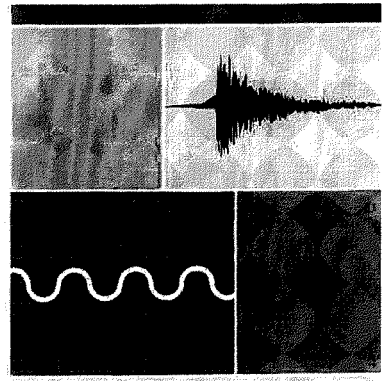

Hearing Aid Compatibility with Wireless Phones and Services

Frequently Asked Questions

Q. What does hearing aid compatibility (HAC) mean for wireless devices (e.g., Cell Phones and PDAs)?

A. The Federal Communications Commission (FCC) defines HAC for wireless devices in terms of two parameters; radio-frequency (RF) emissions and telecoil coupling. Cell phones are tested to see if they comply with the FCC's definition of hearing aid compatibility.

Q. How will I know if a wireless device is rated for HAC?

A. Information about whether a wireless device is rated for HAC can be found in three places: 1) on the display cards next to devices in service provider operated retail stores, 2) on the packages containing wireless devices, and 3) in the product's manual or packaging insert. The packages and display cards will be labeled with an "M" and/or "T" and a rating number. Only devices that are rated for HAC will be labeled in this way. If you see an "M3", "M4 T4" or "T3" label on the display card or packaging then the device is HAC compliant. If you have questions about the rating of a wireless device, ask the service provider or device manufacturer for more information.

Q. What does an "M3" or "M4" on the label mean?

A. "M" refers to the device's RF emissions level, and means the device is intended for use with hearing aids in microphone mode. The higher the "M" rating number on the device, the more likely you will be able to use the device with your hearing aid on the microphone setting.

Q. What does a "T3" or "T4" on the label mean?

A. "T" refers to the device's telecoil coupling ability, and means the device is intended for use with hearing aids in telecoil mode. The higher the "T" rating number on the device, the more likely you will be able to use the device with your hearing aid on the telecoil setting.

Q. What is a telecoil?

A. A telecoil is a small device that is built into some hearing aids for use with the telephone as well as assistive listening devices. To use the telecoil, generally either the hearing aid is switched to the "T" position or a button on the hearing aid is pushed to select the telecoil program. Some newer hearing aids will automatically switch to telecoil mode when using a phone. The telecoil picks up magnetic fields generated by telephones and converts these fields into sound. Telecoils are particularly useful for telephone communication because they permit the volume control of a hearing aid to be turned up without creating feedback or "whistling," and background noise can be reduced especially when using cell phones in noisy places. To determine whether your hearing aid contains a telecoil and how it is activated, ask your hearing health professional.

Q. What does hearing aid compatibility (HAC) mean for hearing aids?

A. Using the same measurement standard that wireless devices use to test for HAC, hearing aids can also be tested and rated for compatibility. This standard measures and rates the hearing aid's immunity to the typical electromagnetic outputs from wireless devices. An M1 or T1 is the poorest immunity rating, and an M4 or T4 is the best immunity rating. Your hearing healthcare professional may assist you in determining if your hearing aid has been rated.

Q. How do I know if my hearing aids will work with a particular cell phone?

A. If your hearing aid is rated for HAC like many wireless devices are, then there is a method for prediction: just add the rating of your hearing aid to the rating of the wireless device. A hearing aid rated M2 and a wireless device rated M3 combine to a give an M rating of 5 and would likely provide "normal" use. An M rating combination of 6 would likely provide "excellent performance". The same would be true of T ratings. The higher the combination, the better the user experience is likely to be. Every individual's hearing loss is unique so ratings do not guarantee performance.

Q. Are there wireless devices I can use with my hearing aid on the telecoil setting?

A. Quite possibly. The FCC requires that wireless devices be rated for HAC specifically for hearing aids in telecoil mode. These devices are labeled with ratings of T3 or T4.

Q. Do the HAC ratings guarantee that I will be able to use a cell phone with my hearing aid?

A. Wireless devices that are rated for Hearing Aid Compatibility (HAC) should improve usability for hearing aid users. However, because of the highly individualized nature of hearing loss and hearing aids there is no guarantee.

Q. May I try a wireless device before I buy it?

A. Yes, it is advisable to try a wireless device with your hearing aid in the store before making a purchase. It's best to try several devices before buying to find the best match with your hearing aids. Visit a full service carrier store and ask to try devices that have been designated as "hearing aid compatible."

Q. Can I return a phone if it does not work for me after purchase?

A. It depends on the return policy. Be sure to understand the return policy, as well as, any early termination fees before signing up for any cell phone or service. Since a cell phone's RF emissions can change depending on your location, be sure to fully evaluate your listening experience outside the store during the return period.

Q. Who manufactures wireless devices that have been approved as HAC by the FCC?

A. All major handset manufacturers are required to offer HAC-compliant devices and may also offer hands-free accessories to improve usability.

Q. Do HAC compliant wireless devices look any different from other devices?

A. No.

Mr. MARKEY. Our next witness is Mr. Jamaal Anderson, who has just finished his rookie season as a professional football player for the Atlanta Falcons, where he starts as a defensive end.

After a stellar collegiate career at the University of Arkansas, he was a first-round draft pick, number eight in the first round for the Atlanta Falcons.

What we are going to do from Boston and Boston College is we are sending you our quarterback, Matt Ryan, down there for next season so we can keep the defense off the field for longer periods of time.

Mr. ANDERSON. Thank you.

Mr. MARKEY. We really hope that works out, sending you the best player we have had in a long, long time.

Mr. Anderson's testimony today is informed by his relationship with his father, Dr. Glenn Anderson. Dr. Anderson is the Nation's first black deaf recipient of a Ph.D. and has taught at the University of Arkansas for 30 years. Dr. Anderson has also served as the Chairman of the Board of Gallaudet. We look forward, Mr. Anderson, to your testimony on the effect of these technologies not only on the individual who is unable to hear or see, but also its impact on the family members and friends of those individuals. We welcome you.

STATEMENT OF JAMAAL ANDERSON, ATLANTA FALCONS

Mr. ANDERSON. Thank you, Mr. Chairman, Ranking Member Stearns, and members of the House Subcommittee on Telecommunications and the Internet. My name is Jamaal Anderson, and I am honored to be here today to talk about communications access by people with disabilities. This testimony is also endorsed by COAT. You may know, now that he already mentioned, that I am starting defensive end for the Atlanta Falcons, but you may not know that my father, Glenn Anderson, is deaf. He was the first black deaf recipient of a Ph.D. in America and has been a professor at the University of Arkansas for 26 years. He was also the chair of Gallaudet University for 11 years. I want to start off by thanking you. In the 1980s and 1990s, your subcommittee helped pass several laws creating access to telephones and television. I witnessed these benefits—excuse me. I am a little nervous here. This is worse than a press conference. So——

I witnessed these benefits of these laws in my own home. My sister and I grew up watching our dad use relay services at home and at work. We have vivid memories of how our father used to enjoy watching his favorite games and captioned programs, especially football games and NCAA tournaments. Although I was too young to remember, my sister told me that before these laws, my dad couldn't make phone calls or watch his favorite TV programs by himself. He had to depend on his mother, on my mother, excuse me, who is hearing and makes calls for him and interpreted what was happening on TV.

Nowadays, all kinds of communications technologies allow us to communicate with anyone, anywhere, at any time. But as these move to the Internet, how many of these will continue to be accessible to people like my father? Companies often make products and services for people that are young, healthy, and have extra spend-

ing cash to buy the latest and greatest gadgets. But they often forget about building devices usable for people with limited hearing, sight, or speech. For example, last year at draft time, Web sites of NFL teams and CNN posted video clips of me, but none of these were captioned, so my dad couldn't watch them on his own. He needed my mom to interpret. Why was this? I am thinking that maybe these companies didn't want to use their resources for access if their competitors weren't doing the same thing.

This is why we have come to you. If you tell companies to make communications services useable over the Internet, all companies will be affected equally. Laws are needed so my father and millions of other Americans with hearing loss like him can use the Internet communications products used by their friends, relatives, and fellow employees. I want to highlight a few ways the proposed draft will achieve this.

While my dad and I are in different states, we communicate in text. In fact, before each game I look forward to my father's words of encouragement and enthusiasm. I can still remember how much his wishes of good luck meant to me the day of our game versus the Indianapolis Colts.

When I was growing up, my dad used TTY to communicate in text. But TTY is use of old technology that is slow, outdated, and doesn't work well on the Internet. Although text messaging, pagers, and instant messages are replacing TTYs, they send instant text in verses, phrases, or lines. They don't transmit letters as they are typed, like TTYs.

By ensuring a real-time tech standard, the bill will make sure deaf and hard-of-hearing people can continue to communicate in real-time over the Internet. In addition to text messaging, my dad and other deaf people regularly communicate using video over the Internet. For example, my dad also calls me through video relay services. He connects to a sign language interpreter remotely on the Internet, and that interpreter signs to my father what I say and speaks back his response to me. It is an amazing technology that allows us to converse naturally and express our emotions to one another in a way that typing never could.

But many people can't afford these broadband services needed for this communication. This bill will allow people with disabilities to use their lifeline or link-up subsidies for broadband services. The bill also allocates $10 million annually for the Universal Service Fund for special telecommunications devices that are needed by people who are both deaf and blind. The promise that all people in America can have a telephone service never reached its population of 100,000 Americans probably because this equipment, which often provides Braille communications, costs thousands of dollars. Though the bill asks only for a small amount of money, it would make a huge difference in these people's lives.

The bill also does a number of other critical things to ensure full access by hearing aid users, relay users, and others needing access that are described in my written testimony.

Mr. Chairman, this concludes my testimony. Thank you for the opportunity to speak before you and the members of the subcommittee. I hope my personal testimony has given you more insight into why this bill is more important for people who are deaf

and hard of hearing, including the rapid growth of the aging population.

People like my father want to keep pace with technology so they can remain active and productive. I also hope my testimony has encouraged you to support this introduction and passage of the proposed bill. Thank you.

Mr. MARKEY. Thank you, Mr. Anderson, very much. I think you will be receiving a text message from your father telling you how proud he is of you here today right after this hearing. Thank you.

Mr. ANDERSON. Thank you.

[The prepared statement of Mr. Anderson follows:]

STATEMENT OF JAMAAL ANDERSON

Good morning Mr. Chairman, Ranking Member Stearns, and Members of the House Subcommittee on Telecommunications and the Internet. My name is Jamaal Anderson, and I am honored to have this opportunity to speak to you about the importance of ensuring communications access to the Nation's millions of Americans who have disabilities, and in particular, Americans who are deaf or hard of hearing. I am privileged to have this testimony endorsed by the nearly 200 organizations that make up the Coalition of Organizations for Accessible Technology, a coalition that is working to obtain accessible communications and video programming in the 21st Century.

You may already know me—I am currently a professional football player for the Atlanta Falcons. Next season I will begin my second year with the Falcons as a starting defensive end. But what you may not know about me is that my father, Glenn Anderson, is deaf. He is a graduate of Gallaudet University and earned his Ph.D. from New York University. (In fact, he is the first Black deaf recipient of a Ph.D. in the United States.) For the past 26 years, he has worked as a professor at the University of Arkansas. From 1994 to 2005, he was also Chair of the Gallaudet University Board of Trustees.

INTRODUCTION AND BACKGROUND

During the 1980s and 1990s, Congress took major steps to improve telecommunications access for people with disabilities. In fact, as you know, this Subcommittee was responsible for helping to pass several pieces of legislation requiring relay services, hearing aid compatibility, closed captioning, and basic access to telecommunications services and equipment. I witnessed the benefits of these laws in my own home. My sister, Danielle, and I grew up watching our father use relay services at home and at work. We have vivid memories of how much our father enjoyed watching his favorite programs on TV, especially the pro football games and the NCAA basketball tournaments. Although I was too young to remember, my sister told me that before these laws were passed, my father could not make telephone calls by himself or enjoy his favorite television programs. He had to depend on my mom, who is hearing, to make calls for him and to interpret what was happening on television.

Nowadays, new communications technologies are changing even more the way our society stays in touch and does business. Now there are all kinds of new opportunities to communicate with anyone, anywhere, at any time, from any place. For example, I can keep in touch with my father by e-mail and instant messaging through my Sidekick or Blackberry pager. And my father often calls my sister and me using video relay services (VRS). These services allow him to connect to a sign language interpreter remotely over the Internet. The video interpreter then calls me and interprets between us, signing to my father what I say and speaking back what he responds to me. It is an amazing technology that allows us to converse naturally, in real-time, and to express emotions far better than typing over text-based relay.

But many newer innovations, especially technologies that use the Internet, are no longer covered by the federal accessibility laws that now exist. What this means is that millions of Americans who, like my father, cannot hear, may not be able to use these new technologies. That is why I am here today: to ask you to pass legislation that will ensure that my father and other Americans with hearing loss have access to the Internet and digital communications tools that are needed to allow them to maintain their independence, productivity, and privacy.

We all know that technology companies design their products and services for certain markets—most of the time, these are American markets that are youthful and able-bodied—they have more money, and they are willing and able to try out new, fancy devices. But often these products or services are not built for people who have some difficulty hearing, seeing or speaking. For example, last year at draft time, a number of Web sites, including sites posted by NFL teams, NBA teams and news entities (CNN and MSNBC), showed video clips of me. But my dad couldn't watch them on his own; he needed my mom to interpret because none of the sites were captioned. Why don't companies include access when they develop services and products for the general public? I believe there are several reasons. Some companies are simply unaware of the needs of people with disabilities. Other companies don't want to use their resources to create accessible products if their competitors aren't doing the same thing. I understand that it is hard for people with disabilities to create enough market pressure to influence companies to design accessible products—especially when companies believe their money is better spent on trendy electronic features that appeal to a wider public.

This is why we have come to you. If you direct all companies to make new Internet-based and digital innovations used for communication accessible, all companies will be affected equally and no one company will have an advantage over another. Even more importantly, if companies ensure that accessibility features are built into Internet services and products now, while they are still being developed, the costs of including these features will be a small fraction of the overall costs of producing these products. But if these companies wait until later, after their products are already on the market, retrofitting will cost a lot more, and the resulting access is not likely to be as effective. These are the principles of universal design contained in Section 255 of the 1996 amendments to the Communications Act, and they are the principles that should be followed when this new bill is introduced and passed.

People like my father do not want to be relegated to obsolete technologies or have to buy "specialized" equipment that is often hard to find and more expensive. They want an equal opportunity to benefit from the full range of mainstream Internet products that they see being used by their friends, relatives, and colleagues. The "Twenty-first Century Communications and Video Accessibility Act" will accomplish these goals. Not only will it direct accessibility solutions for Internet-enabled and digital communications-based technologies, it will also require the creation of a clearinghouse of information on accessible telephone-like products and services used for communication over the Internet. This clearinghouse, along with greater outreach and education by the Federal Communications Commission (FCC), will help educate consumers about accessibility solutions and how to find products and services that they can use.

REAL-TIME TEXT IN AN INTERNET-BASED WORLD

One of the most important things that the proposed draft does is that it guarantees deaf and hard of hearing people who rely on text (rather than voice) the ability to continue having conversations in real-time, as communications move to digital and Internet-based technologies. When I was growing up, my father routinely communicated with friends and relatives using their TTYs. But TTYs use very old technology ("Baudot"). These devices are also very slow (transmitting a maximum of 60 words per minute), work only in one direction at a time (you have to wait until one party finishes typing before you can respond), and generally are not reliable over Internet networks. Their many drawbacks have caused my father and many other deaf people to turn to text messaging, pagers, and instant messaging as their principal means of text communication. But the problem is that these newer methods do not transmit letters as they are typed (as TTYs did). Instead, with these data-based devices, individuals type and then send text in bursts of phrases, lines, or sentence-by-sentence, rather than sending each character as it is typed.

For millions of people with hearing disabilities, communicating by text is functionally equivalent to communicating by voice. I cannot forget how much it meant to me when my father sent me a text message wishing me "Happy Thanksgiving and good luck" on the day of our game against the Indianapolis Colts. Before each game I look forward to my father's words of encouragement and enthusiasm. And just like there are times when hearing people need to have a conversation in real-time (as compared to sending text messages on cell phones or instant messages over a computer), there are times that people who cannot hear need to have their message received as it is being sent. For example, in emergencies it is very important to be able to convey and receive every piece of information as quickly as possible and at the exact time that it is happening. The draft bill being considered today will ensure that there is a uniform and reliable real-time text standard so that people who are

deaf, hard of hearing or who have a speech disability can communicate in a manner that is equivalent to communication between people who can use their voices.

UNIVERSAL SERVICE

In addition to enjoying text-messaging through pagers, a great number of deaf people now use Internet-based forms of relay service and in particular video relay services (VRS). The reason is simple: these forms of relay service offer far more effective ways to communicate than traditional text-based relay services. Internet-based text relay allows the transmission of text at much faster speeds than TTYs and enables conversations to travel simultaneously in both directions. And, as noted above, VRS allows individuals who use sign language to have conversations that flow more naturally, quickly, and transparently between the parties, achieving a telephone experience that more closely parallels the experience of people without hearing disabilities. Approximately one million deaf individuals who sign can benefit from VRS as well from being able to have direct video conversations with other people who sign. In addition, millions more people who are hard of hearing can benefit from using Internet-based video connections to see people's faces as they speak and lipread conversations. Likewise, more than 2.5 million people whose speech is difficult to understand may benefit from video communication because their gestures and facial expressions can be seen by the parties to the call.

Unfortunately, not every person with a hearing or speech disability can afford to pay for the high speed broadband Internet service that is needed to support video communication. Some of these individuals meet the income criteria to be eligible for Lifeline/Link-Up phone service subsidies, but they cannot use these discounts toward the cost of broadband services. Because the Lifeline and Link-Up programs are tied to telephone network-based services, these programs offer no financial assistance for low-income individuals with disabilities who want to replace their TTYs with improved, Internet-based forms of communication. Under the proposed draft bill, individuals with disabilities who need the Internet to communicate over distances would be able to choose whether to use their Lifeline or Link-Up subsidies for telephone network-based services or high speed broadband services.

A second universal service provision addressed by the proposals under consideration will greatly impact people who are both deaf and blind. Although the universal service provisions enacted by Congress in 1996 were designed to make sure that everyone in America has access to telephone services, one group of Americans—deaf-blind Americans—continue to be denied this promise. Although a few states have programs that distribute specialized customer premises telephone equipment, the vast majority of these programs do not give out telecommunications equipment that is accessible to deaf-blind people. One reason is that typically this equipment (such as communication devices with refreshable Braille key pads) costs thousands of dollars. The result is that of all people with disabilities, deaf-blind individuals are the least able to access current telecommunications systems.

It is for this reason that we are asking for a very small portion of the Universal Service Fund (USF)—$10 million annually—to be set aside each year to fund the distribution of specialized telecommunications devices needed by approximately 100,000 Americans who are deaf-blind. The small size of this targeted amount will not be overly burdensome for the USF but will make a huge difference in the lives of this population, which remains one of the most underserved populations in telecommunications history. Allocating these funds will also inform the world that as the United States moves to upgrade its telecommunications systems, it is not leaving behind this previously unserved population of individuals.

HEARING AID COMPATIBILITY AND RELAY SERVICES

Another important provision in the bill will ensure that millions of people who use hearing aids, cochlear implants, and other assistive hearing devices will be able to use these devices with telephones that connect via the Internet. Federal law has required wireline, cordless, and many wireless telephones to be hearing aid compatible since 1988. However, new smartphones entering the marketplace are not working for hearing aid users, and their coverage under this law has come under question. As an aging nation, we simply cannot go forward without ensuring that these Internet-enabled phones are also hearing aid compatible.

Also important is a proposal in the bill to allow users of one type of relay service, such as VRS, to call a user of another form of relay service, for example, a text-to-speech relay service. The FCC has been interpreting the Communications Act to mean that relay services can only be used to provide telephone services between a person with a hearing or speech disability and a person without a disability. The result has been that people with speech and hearing disabilities who use different

forms of relay services have not been able to call each other. This surely could not have been Congress's intent back in 1990 when it directed the creation of a nationwide system of telecommunications relay services to integrate people with hearing and speech disabilities into the public telecommunications network!

CONCLUSION

Mr. Chairman, this concludes my testimony. We call upon Congress to ensure that people with disabilities—including the rapidly growing population of senior citizens who experience reduced hearing with increasing frequency—are not left behind as communications technologies move to the Internet and new digital technologies. Thank you for the opportunity to speak before you and members of the House Subcommittee on Telecommunications and the Internet. I hope my personal testimony has given you more insight into why this bill is important for people who are deaf and hard of hearing. I also hope my testimony has encouraged you to support the introduction and passage of this critical legislative proposal.

SUMMARY

Many of the laws that Congress enacted to require telecommunications access by people with disabilities in the 1980s and 1990s do not cover new Internet-based communications technologies. What this means is that the millions of Americans who, like my father, cannot hear are no longer protected by federal statutes guaranteeing their ability to have communications access. In this testimony, I call upon Congress to ensure that accessibility features are built into Internet-based services and products now, while they are still being developed, so that all Americans with disabilities can take advantage of the extraordinary benefits that these technologies have to offer. I urge passage of the proposed draft of the "Twenty-first Century Communications and Video Accessibility Act," which will accomplish these goals of universal design by:

- Mandating access to Internet-enabled communications products and services;
- Requiring the creation of a clearinghouse of information on accessible Internet-based telephone-like products and services;
- Directing greater outreach and education by the Federal Communications Commission on consumer rights to accessible communications;
- Requiring a uniform and reliable real-time text standard to enable people who are deaf or hard of hearing or who have a speech disability to communicate in a manner that is equivalent to voice telephone communication;
- Allowing individuals with disabilities who rely on high speed broadband for their communication (e.g., for video communication) to designate whether to apply their Lifeline or Link-Up subsidies for high speed broadband in place of telephone network-based services;
- Allocating up to $10 million annually of the Universal Service Fund for the distribution of specialized telephone communications devices needed by Americans who are deaf-blind;
- Requiring Internet-based voice communications devices to be hearing aid compatible; and
- Clarifying that persons with hearing and speech disabilities who use different forms of telecommunications relay services may call each other, even when two forms of relay services are needed to complete these calls.

Mr. MARKEY. Our next witness, Larry Goldberg, is the Director of Media Access at WGBH, Boston's public broadcaster. WGBH has been at the forefront of media accessibility issues for more than 30 years, starting with the very first closed-captioning of television programs. Mr. Goldberg has been involved in the technical and policy issues concerning media access for many years and has been at the crossroads of access efforts by both members of the disabled community and representatives of the industry. He brings real-world experience to our committee today. We welcome you, Mr. Goldberg. Whenever you are ready.

STATEMENT OF LARRY GOLDBERG, DIRECTOR, MEDIA ACCESS, WGBH

Mr. GOLDBERG. Thank you, Chairman Markey and Ranking Member Stearns and members of the Subcommittee for the opportunity to testify before you today and to show you some demonstrations. As you said, I am Larry Goldberg, and I am Director of Media access at WGBH. WGBH is the home of public television series such as NOVA, Antiques Road Show, Frontline, American Experience and many educational children's programs. WGBH is also where captioning of television for deaf and hard-of-hearing people began in 1972 with open caption versions of Julia Child's "The French Chef." In 1980, closed captioning was launched, enabling all TV viewers to select captioning at the touch of a button. WGBH's development of innovative technologies, standards, and creative production solutions next paved the way for passage of the TV Decoder Circuitry Act, requiring caption decoders in most TV sets. Ultimately, the 1996 Telecom Act resulted in widespread availability of TV captioning, and I should mention, last night CBS launched with us Spanish versions of The Price is Right with English and Spanish captions, along with 60 Minutes in Spanish and English both.

In 1990, WGBH developed the descriptive video service for people who are blind or visually impaired. DVS, or video description, provides viewers with carefully crafted descriptions of key visual elements. Today, DVS is provided on dozens of public TV programs for children and adults alike. WGBH also produces description for some programs on CBS and FOX. I am going to show you an example of video description from WGBH's American Experience documentary about baseball's Roberto Clemente. Listen for the added woman's voice. She is voicing the video descriptions.

[Video played.]

Mr. GOLDBERG. That is good. The Pirates won that World Series.

In April of 2002, the FCC enacted a limited video description mandate based on its reading of the 1996 Telecom Act. Commercial networks began providing 4 hours of described programming per week and ensured the proper delivery of DVS to viewers, as required by the FCC rules. However, a court challenge overturned the FCC's video description requirement, arguing that the FCC misinterpreted Congress's intent. Your bill, Mr. Chairman, clarifies that Congress intended to make television accessible to all Americans, including those who are blind or visually impaired. The bill will also require that programs with description reach their intended audiences, addressing new barriers that have been inadvertently created by the new digital broadcast cable and satellite pathways to the home.

WGBH also houses an R&D office, the National Center For Accessible Media, or NCAM. NCAM's mission is to identify and address barriers and disseminate solutions that enable access to new and emerging media. As you know, Mr. Chairman, more and more people are watching TV on their computers and mobile devices and, just as in the early days of TV captioning, new technologies, standards, and production processes are being developed to enable Web-based captioning. These innovations have not yet been widely

adopted and further work is needed on editing and dissemination protocols and common and interoperable media formats.

Implementations of online captioning have emerged, however, and can be seen on Web sites for TV programs created by WGBH for PBS, including our science series NOVA, as well as on a few commercial Web sites. Apple now makes available some closed captioned movies in its iTunes store. I would like to play an example of a captioned online TV show from the Web site of WGBH's Peep and the Big Wide World, a children's math and science program. This Flash-based video uses an innovative captioning technique developed by WGBH and Adobe.

[Video played.]

Mr. GOLDBERG. Thank you. Even though examples like this have been successfully deployed, captioning of web-based media is still relatively rare. To overcome the final technology and production barriers, WGBH convened the Internet Captioning Forum that you mentioned, whose members are the leading creators and distributors of Web-based video. With a more concerted national effort, with strong consumer activity by people who are deaf and hard of hearing and with your focused attention on this matter, Mr. Chairman, I believe that a day will soon come when vastly more captioning will be available on Web sites nationwide and beyond. Thank you.

Mr. MARKEY. Thank you, Mr. Goldberg, very much.

[The statement of Mr. Goldberg follows:]

STATEMENT OF LARRY GOLDBERG

Thank you Chairman Markey, and members of the Subcommittee, for the opportunity to testify before you today.

My name is Larry Goldberg, and I am the Director of Media Access at WGBH, Boston's public broadcaster. WGBH is not only the home of such prominent PBS television series as "NOVA," "Antiques Roadshow," "Frontline," and "American Experience," and many educational children's programs such as "Arthur," "Between the Lions," and "Curious George." WGBH is also where captioning of television for deaf and hard-of-hearing people began. More than 35 years ago, our production of Julia Child's "The French Chef" was the first open-captioned TV program, followed by a decade of the ground-breaking "Captioned ABC Evening News" and other entertainment, news and children's programs we captioned for PBS.

In 1980, WGBH, along with PBS engineers, launched closed captioning, enabling all TV viewers to select captioning of a limited number of TV programs at the touch of a button. WGBH's development of innovative technologies and creative production solutions preceded the launch of both open and closed captioning and led the way to the pervasive captioning we have available today.

In 1990, a similar effort enabled the launch of WGBH's "Descriptive Video Service," or DVS, the first widely available media access service tailored for the needs of people who are blind or visually impaired. Exploiting the newly launched stereo television audio system (known as MTS or Multichannel Television Sound), our DVS provides viewers with carefully crafted descriptions of key visual elements, timed for insertion during the pauses in dialog. Initially only available on a handful of PBS programs, DVS is now provided on dozens of public TV programs for children and adults alike, and WGBH describes programs on commercial broadcast and cable networks as well. From Turner Classic Movies to CBS's "CSI" and Fox's "The Simpsons," blind and visually impaired viewers have told us over and over again how much they appreciate having access to the electronic media their sighted friends and family take for granted.

In the late 1990s and into the early 21st century, WGBH worked with its constituents in the blind community to provide the FCC with the technical, financial, and operational information it needed to institute a modest requirement for the carriage and delivery of video description. Based on its reading of the Telecommunications Act of 1996, the FCC's mandate went into effect in April 2002. Until Novem-

ber of that year, commercial broadcast and cable networks provided four or more hours of described programming per week and ensured the proper delivery of that extra audio signal to their viewers, as required by the FCC rules.

However, a challenge brought before the U.S. Court of Appeals for the D.C. Circuit overturned the FCC's video description requirement, arguing that Congress hadn't clearly stated its intention to require description the way they had regarding closed captioning. Your bill, Mr. Chairman, would clarify Congress's intent to make television accessible to all Americans, including those who are blind or visually impaired. The bill would also assure that programs that have been produced with description reach their intended audiences, clearing the many barriers inadvertently created in the new digital broadcast, cable and satellite pathways to the home. We strongly support all aspects of the reinstatement of the FCC's video description mandate.

In 1993, with initial funding from the Corporation for Public Broadcasting, WGBH launched the research and development arm of its media access activities, now known as the Carl and Ruth Shapiro Family National Center for Accessible Media at WGBH (or "NCAM" for short). NCAM's mission has been to reach out to people with sensory disabilities all over the world to understand and ascertain their media and communications needs and then to take action to help meet those needs. From membership in numerous standards committees in all technological fields, to advising Federal agencies and corporate partners, to developing tools and processes, NCAM endeavors to investigate, create and disseminate practical and usable techniques to lowering barriers for social inclusion. Often with generous grants from Federal agencies such as the National Science Foundation and the Departments of Education and Commerce, NCAM has acquired deep expertise and developed accessibility solutions for theatrical motion pictures, DVDs, in-flight entertainment systems, digital set-top boxes, mobile devices such as PDAs and cell phones, and online, Web-based media, among other platforms. An ongoing project with NPR focusing on accessible radio technologies[1] has excited the interest of members of both the deaf and blind communities.

Today, due to the wider availability of high-speed, broadband Internet service and the recognition by content providers that consumers of media want more viewing options and personal control of their media choices, more and more people are watching their favorite TV shows on their computers (and mobile devices). And just like in the early days of TV captioning, technologies and standards have had to be developed, and innovative production processes created, to enable the availability of captioning of Web-based media. Much of the software and platform development work has been done, is being deployed, and is described below. What remain to be addressed are common production and distribution processes that will bring to deaf and hard-of-hearing citizens what they've come to expect from the media they consume.

These developments started as long ago as 1991, when Apple released its first version of QuickTime with its support of user-selectable "text tracks" for computer-based video. Subsequent similar developments by Microsoft (the Synchronized Accessible Media Interchange for Windows Media Player[2]) and RealNetworks (which bases its RealText format on the World Wide Web Consortium's (W3C) Synchronized Multimedia Integration Language[3]) and Adobe[4] have also made the provision of textual representations of a Web-based video's audio track a technically achievable task. Many Web-based video providers have expressed the desire for a single, universal text file format, and one initial effort toward this goal has been the W3C's "Distribution Format Exchange Profile" (DFXP)[5] which was developed by the W3C's "Timed Text Working Group," established in 2003. Now under consideration to become an industry-wide specification, DFXP would allow for consistency across various authoring systems and platforms and would provide a common data format for content providers to use in providing captions, much the way line 21 (CEA–608) has been established as the format for analog TV transmissions and DTVCC (CEA–708) are now used for digital TV.

Implementations of these various online captioning technologies can now be seen on Web sites for TV programs created by WGBH for PBS, such as NOVA,[6] Peep and the Big, Wide World,[7] and others. In addition, the video hosting Web site

[1] http://www.nprlabs.org/research/nidrr.php
[2] http://msdn2.microsoft.com/en-us/library/ms971327.aspx
[3] http://service.real.com/help/library/guides/production8/htmfiles/smil.htm.
[4] http://www.adobe.com/accessibility/
[5] http://www.w3.org/TR/2006/CR-ttaf1-dfxp-20061116/.
[6] http://www.pbs.org/nova
[7] http://peepandthebigwideworld.com

Hulu.com, recently launched by Fox and NBC, includes captioning on a number of the series it provides for free. And late last year, Apple announced support for closed captions in its iTunes software and store, QuickTime software and iPod and iPhone devices. Apple's new technical solution (known as ".scc") derives its caption data directly from broadcast TV caption files.

There are now a number of tools that content providers and distributors can use to convert their traditional television captions into captions for web-based video, or to create and display original captions for online media. Examples include "CaptionKeeper,[8]" "MAGpie," and "CC for Flash,[9]" from NCAM, Captionate[10] from the Manitu Group, a variety of products from CPC,[11] and the professional-grade, most commonly used software in the U.S. captioning industry, Softel Swift[12].

Even with these tools and file formats available, many hurdles remain to make captioning of Web-based media as pervasive as it is on television. In an effort to overcome these final technology and production barriers, the leading providers of Web-based video have come together to create the Internet Captioning Forum (ICF),[13] facilitated by WGBH, to develop solutions that will increase the amount of online video accessible to people who are deaf or hard of hearing. AOL, Google, Microsoft and Yahoo! are the pioneer members of the ICF who will initially address the technical challenges presented by online video repurposed from broadcast or other previously captioned sources, as well as video created specifically for the Web. The collaboration is expected to yield a range of solutions and tools, among them:

- A database for online media distributors, populated by major captioning providers, of previously captioned programs. This tool will facilitate the location and reuse of existing caption files.
- Technical and standards documents, case studies and best practices for accomplishing pervasive online video captioning.
- Demonstrations of innovative practices to preserve captions while editing and digitizing captioned videos.

A recent meeting convened by the ICF in Burbank, California, included representatives from the digital media divisions of all of the major broadcast networks, leading cable networks, and other important players in the online media world. This gathering yielded the following consensus agreements and action items identified as needing attention to advance the cause of online captioning:

- All of the attendees, whether from hosting sites or content providers, were enthusiastic about solving the remaining problems and moving forward to accomplish pervasive availability of captions on web-based video.
- There was discussion about the benefits of a singular agreed-upon format for captioning on the web, with DFXP being a likely candidate. Interchange from other formats will be very useful and changes to the DFXP standard are needed, implementations need to be encouraged, and an organization needs to take on these tasks to accelerate progress.
- Apple's captioning solution (.scc files utilizing 608 data) for bringing closed captions to their universe (iTunes, QuickTime, iPods, iPhones) may serve for other entities as well.
- Software translators are needed to facilitate the conversion of caption text from a variety of formats to common ones for the web. These transformations should include broadcast caption/subtitle formats (608, 708, World System Teletext) that can be turned into DFXP, .scc, etc.
- Editing tools and systems are needed to repurpose existing caption files for use on web-based media. The major issues are adjusting for commercial blacks and rippling of time code when alterations are made to programs as they move to the web.
- Research into best practices for web-based closed captioning is needed, including use of caption placement, font sizes, styles, user controls, and other options.

These challenges identified by the ICF and the engaged content providers point the way for solutions to making captioning more widely available for web-based media.

Thank you for your time, and I welcome your questions.

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[8] http://www.captionkeeper.org
[9] http://ncam.wgbh.org
[10] http://www.buraks.com/captionate/
[11] http://www.cpcweb.com/
[12] http://www.softel-usa.com
[13] http://www.InternetCCforum.org

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Mr. MARKEY. Our next witness is Ken Nakata, who is the Director of Disability Initiatives and Government Compliance for BayFirst Solutions. BayFirst Solutions is a consulting firm that provides program management, system engineering and risk management and learning services for government agencies and private sector companies. We welcome you, sir. Whenever you are ready, please begin.

STATEMENT OF KEN NAKATA, DIRECTOR, DISABILITY INITIATIVES AND GOVERNMENT COMPLIANCE, BAYFIRST SOLUTIONS LLC

Mr. NAKATA. Good morning, Chairman Markey, Ranking Member Stearns, and members of the subcommittee. My name is Ken Nakata, and I am the Director of Disability Initiatives and Government Compliance for BayFirst Solutions. Thank you for allowing me to present a brief overview of my opinions on this important bill and to provide you—my written testimony provides a more complete description, however, of my views and provides also supporting references for my opinions.

For almost my entire professional career, I have worked on promoting and enforcing the rights of people with disabilities. I firmly believe that the Federal Government plays a key role in upholding these rights. For 12 years, from 1992 to 2004, I had the privilege of working as a trial attorney with the disability rights section of the U.S. Department of Justice. For the last 4 years, I have worked as a consultant to make information technology of private companies and Federal agencies more accessible. Legislation like this draft bill is needed for people with disabilities to be more fully included in this digital era.

I support the promise of this bill and its important goals, but I would like to spend my time today talking about two points which were mentioned by Ranking Member Stearns earlier today, the undue burden defense and the private right of action, both of which I see as creating potential unintended consequences, both for the IT industry, but actually more importantly for the disability community as well. My opinions are based on what I have seen firsthand as a former litigator, a disability rights advocate, and as a consultant.

First, the current provision allowing private rights of action has the potential for serious unintended consequences. I believe that it is important to hold industry accountable to their promises, an opinion I have always held when I was working at the Justice Department. But I also know that the litigation can be a Pandora's box, because without procedural safeguards, it is difficult to control. This point was made very clear to me when I was working at the Department of Justice and I was—at the time we were trying to develop good case law around providing Internet access for people with disabilities, particularly people who are blind, trying to access Web sites. Then, in 2002 advocates sued Southwest Airlines for their inaccessible Web site. And as a litigator, I thought this was the worst possible case we could have because it had terrible

facts and it was in an inhospitable forum. But we called the plaintiffs, asked them to reconsider. And they just pushed ahead with litigation. The court's opinion was a disaster for the disabilities rights movement. The Southwest Airlines decision remains the single biggest impediment to Web site accessibility to this day and holds millions of blind Americans back from full inclusion in our digital era. The undue burden defense also has potential for what I think are even potentially more significant unintended consequences but in a very different way. I believe that the IT industry has spent and should continue to spend considerable resources making information technology accessible to people with disabilities. As described more thoroughly in my written testimony, however, the undue burden defense is radically different from the readily achievable defense currently in Section 255. While the undue burden defense has never been used with multibillion-dollar IT companies solving difficult accessibility problems, it will, as currently formulated by the Department of Justice and by the courts, require these companies to devote all or substantially all of their profits to solving these problems.

As threatening as that might appear to the IT industry, I think it actually creates bigger problems for the disability community down the road. The simple reason is that I just can't see a court doing that. And they are holding an IT company responsible to that degree. The problem of course—and the only way out, of course, is for the court to weaken the undue burden defense. And the problem with that, as far as I can see, is that there are other very important civil rights that hinge upon having a very high undue burden threshold right now.

For instance, the reason a deaf patient can get a sign language interpreter before a risky operation at a hospital is because the undue burden threshold is so high. The reason state and local governments have to make all of their programs and services accessible to people with disabilities is because we have a very high undue burden threshold.

As an attorney who has worked in the disability rights field for such a long time, I would be very saddened to see the progress that we have made over the last two decades of ensuring the basic rights for people with disabilities eroded by using the undo standard here. These unintended consequences, however, don't have to become a reality.

I thank the subcommittee for its hard work in creating a sensible law that helps level the playing field for our Nation's 54 million people with disabilities. I support your work, but I would urge you to do so carefully. And I look forward very much to your questions, and I hope that I can continue working with you as you move forward in this important work.

Mr. MARKEY. Thank you very much, Mr. Nakata.

[The prepared statement of Mr. Nakata follows:]

STATEMENT OF KEN NAKATA

Good morning, Chairman Markey, Ranking Member Stearns, and members of the Subcommittee. My name is Ken Nakata, and I am the Director of Disability Initiatives and Government Compliance for BayFirst Solutions LLC. I am testifying today, however, in my personal capacity. Thank you for the opportunity to present

my independent views on the staff discussion draft of the Twenty-first Century Communications and Video Accessibility Act of 2008.

Since 2004, I have worked in the Seattle office of a Washington, DC-based consulting firm. My focus is helping government and industry make its information technology accessible. I work with a young and highly motivated team of software developers and testers helping large Federal agencies and corporations meet the needs of their customers and employees with disabilities. This work involves developing innovative solutions as well as applying well-understood existing solutions to large or complex accessibility problems.

Before 2004, I was a trial attorney with the U.S. Department of Justice. For 12 years, I worked at the Department on enforcement of the Americans with Disabilities Act (ADA) and on helping the Federal government implement Section 508 of the Rehabilitation Act. In that role, I represented the United States numerous times in Federal court and vigorously enforced some of the Department of Justice's first cases under the ADA. I have worked on many controversial cases with broad social impact and many less controversial cases with smaller impact. I have also been asked by Federal courts to participate as *amicus curiae,* in order to present the position of the United States where the constitutionality of a Federal statute has been called into question.

My Department of Justice experience also includes a deep focus on information technology. I worked extensively with disability advocates, industry, and government when I helped the Federal Government make its information technology accessible as a result of Section 508 of the Rehabilitation Act. In that role, I helped develop the Section 508 regulations for accessible electronic and information technology, helped create the Federal Government's technical assistance for implementing Section 508, oversaw all three government-wide surveys conducted by the Attorney General, and co-authored all of the Attorney General's reports to the President and the Congress on Section 508 compliance. My work in information technology also extends beyond Section 508, as I have authored white papers and presented on the intersection between other disability rights laws and the Internet.

Much of the staff discussion draft of the Twenty-first Century Communications and Video Accessibility Act of 2008 is focused on improving access for people with disabilities to Voice over Internet Protocol (VoIP) telecommunications services and on providing captioning for Internet-delivered media content. I support these goals and commend the Subcommittee for their efforts to further them. While I believe that additional regulation in this area is needed, I do not support a private right of action (as currently drafted), and I do not believe that the undue burden defense is appropriate.

I. Need for More Effective Legislation

Title I of the Twenty-first Century Communications and Video Accessibility Act of 2008 bill is focused on improving access for people with disabilities to Voice over Internet Protocol (VoIP) telecommunications. I believe that this legislation is important because of the growing importance of VoIP communication and because the proposed bill corrects a communication gap present in Section 255 of the Communications Act.

In 1990, Congress passed the ADA, which is now widely seen as the most important civil rights law since the Civil Rights Act of 1964. Title IV of the ADA required telephone companies to provide relay services for deaf and hard of hearing customers. By the time of the ADA's passage, telecommunication devices for the deaf (TDDs) were a well-understood and proven technology. By creating relay services, millions of American businesses were suddenly "open for business" to deaf and hard of hearing customers who could not otherwise communicate by telephone. Much work remains before VoIP and real-time text can provide a complete alternative to TDDs. I commend the Subcommittee for furthering this work and helping ensure that people with disabilities can participate meaningfully in our digital age.

Title I of the proposed legislation also seeks to make the accessibility efforts by manufacturers and service providers more transparent to consumers. Specifically, the draft requires manufacturers and service providers to file a "written accessibility and compatibility impact analysis" for each product or service. While I cannot comment on the competitive impact or legal risk that providing an impact analysis may create for manufacturers and service providers, some additional steps beyond the current Section 255 framework would help address the perception of a market failure of Section 255. I trust members of industry when they identify their successes under Section 255 in developing more accessible products. But, I also appreciate the frustration I hear from members of the disability community when they describe how their needs are not being met. If the market has failed with Section 255, it

isn't from a lack of innovation but a lack of communication. More needs to be done to ensure that industry can effectively communicate that it understands the needs of the disabled community—and that it is responding. Making the process more open and more transparent also fosters greater opportunities for partnership between industry and advocates in the disability community. Working together and helping each other understand both the opportunities and the limitations each faces will better enable us to provide greater accessibility. While providing "written accessibility and compatibility impact analysis" may prove to not be the ideal solution (particularly in combination with other provisions as described below), some mechanism that improves communication between industry and consumers is a step in the right direction. For instance, the Subcommittee's proposal for a clearinghouse in Section 104 should be particularly useful and may advance accessibility for everyone.

Title II of the draft bill focuses on captioning and video descriptions for Internet-based multimedia content and seeks to reinstate the Commission's video description regulation struck down in Motion Picture Association of America v. FCC, 309 F.3d 796 (D.C. Cir. 2002). As more and more multimedia content is created, we face an increasing backlog of content that fails to meet the needs of people with disabilities. I commend the Subcommittee for recognizing that need and spurring this key work forward.

Both sections of the draft Twenty-first Century Communications and Video Accessibility Act of 2008 bill are excellent starting points for this important discussion. While this draft bill focuses on many of the needs in America that are not being met, I am concerned about two provisions that may harm both industry and the disability community.

II. Private Right of Action is Not the Answer

During my 12 years at the U.S. Department of Justice, much of my work involved enforcing Titles II and III of the ADA. This was the most rewarding job I have ever had. I was one of the first attorneys to join the new Office on the Americans with Disabilities Act in 1992, just as Title III of the ADA came into effect. I worked on some of the first architectural cases by the Department and represented the United States on many occasions in Federal court. I strongly believe that litigation plays an important role in upholding our laws in the right circumstances. Those circumstances, however, are not present in this bill.

First, I believe that a private right of action makes sense when there are clear rules of conduct that our society can expect people or companies to follow. Our society expects architects to follow accepted accessibility standards when designing a building. Our society expects an event planner to think about the communication needs of deaf visitors and request a sign language interpreter from a local deaf services center. Unfortunately, these clear rules of conduct do not exist in the information technology world where the means by which we provide access are still unclear or yet to be developed. Our society expects information technology to do something to meet the needs of people with disabilities—the problem is that none of us can definitively say what that something is.

Second, I believe that a private right of action is inappropriate because it thwarts innovation. All of us, including people with disabilities, benefit from the creativity of the information technology industry. Unlike many other industries, the IT industry regularly creates entirely new categories of products that create both barriers and opportunities for people with disabilities. For instance, instant messenger technologies, such as AOL Instant Messenger or Internet Relay Chat (IRC), were developed and intended as a means of easy real-time communication between computer users. Also, two-way alphanumeric pagers and RIM devices (predecessors of the current Blackberry) were intended as portable messaging devices for mobile professionals. Both of these technologies remained inaccessible to blind users for many years. At the same time, both of these technologies revolutionized communication for deaf and hard of hearing individuals and may now even supplant long-established technologies like TDDs. Unfortunately, a private right of action makes it far less likely that these kinds of technologies will come to market in the first place. Venturing into new product categories are risky business decisions for IT companies. When complicated by the risk of litigation, IT companies will be even less likely to innovate. In the end, however, it may be consumers with disabilities who pay the highest price.

My concerns about the risks of a private right of action are also heightened by the lack of safeguards against frivolous or vexatious litigation. For instance, potential plaintiffs do not have to first exhaust their administrative remedies before proceeding to Federal court. As a consequence, agencies with particular expertise (such

as the FCC) do not have an opportunity to resolve a complaint before costly and damaging litigation. In addition, damages are not limited. In this regard, Title III of the Americans with Disabilities Act, which limits remedies to injunctive relief and attorney's fees, provides a useful model as it reduces the likelihood that companies will be singled out for litigation.

Without some limits in place, a private right of action can hurt the disability rights movement. For the last 10 years, I have focused on IT accessibility, with a particular focus on improving access for persons with disabilities to the Internet. While I was still at the Department of Justice, advocates sued Southwest Airlines in 2002 to make their Web site accessible. When we learned about the lawsuit, we called the plaintiffs and warned them about the weaknesses in their case, but the plaintiffs pressed forward. The court's eventual ruling in Access Now, Inc. v. Southwest Airlines, 227 F. Supp. 2d 1312 (S.D. Fla. 2002) was a disaster for the disability rights movement. The decision remains the single biggest obstacle to Web site accessibility to this day.

III. The Undue Burden Defense is Not Appropriate

Section 104 of the staff discussion draft requires manufacturers and service providers to ensure that equipment and services are accessible to and usable by individuals with disabilities unless doing so would result in an undue burden. This wording represents a change from the language of Section 255 of the Communications Act, which uses the readily achievable defense. I believe that the shift from readily achievable to undue burden is a significant change that should be avoided.

The undue burden defense originates with the Supreme Court's decision in Southeastern Community College v. Davis, 442 U.S. 397 (1979). Since then, the undue burden defense has developed through the Department of Justice regulations for Section 504 [1] and the Americans with Disabilities Act. [2] Federal courts defer to these regulations and the Department of Justice's interpretations of undue burden in litigation. [3] These interpretations make clear that all of the financial resources of a public accommodation need to be considered in determining whether an undue burden has been created. [4] Opting for an undue burden standard also shifts the burden of proof to the defendant. [5] As described below, I believe that using such a high threshold is counterproductive—it creates risks for innovation in industry but creates even greater unintended risks for the disability rights movement.

Unlike the undue burden defense, the readily achievable defense is easier to understand and is a much lower threshold. The term "readily achievable" was introduced in Title III of the ADA and defined as "easily accomplishable and able to be carried out without much difficulty or expense." [6] Although it uses the same factors as the undue burden defense, the readily achievable defense was intended to be less difficult for businesses. [7] It also places the burden of proof on the plaintiff. [8]

There is an enormous difference between the readily achievable standard and the undue burden defense. Ultimately, the Subcommittee may decide that both defenses are inappropriate in this setting. As noted above, I believe that the shortcoming of Section 255 is its failure to create an open dialog between industry and consumers—

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[1] 49 Fed. Reg. 35,724 (1984).

[2] 28 C.F.R. pt 36 (2008).

[3] Stinson v. United States, 508 U.S. 36, 45 (1993); Chevron Inc. v. Natural Resources Defense Council, 467 U.S. 837, 844 (1984).

[4] United States Memorandum of Law as Amicus Curiae in Support of Plaintiff's Motion for Summary Judgment and in Opposition to Defendant's Motion at 27, n. 31, Kovacs v. Kawakami (D.D.C. Feb. 24, 1995)(No. 93-2576). See also, Letter from Acting Assistant Attorney General Isabelle Pinzler to Senator Joseph Lieberman (Aug. 28, 1997); Letter from Section Chief John Wodatch to Dr. Kenneth Hrechka (Feb. 16, 1995); Letter from Assistant Attorney General Deval Patrick to Senator Phil Gramm (Dec. 29, 1994); Letter from Section Chief John Wodatch to Dr. W. Yates Trotter (Jan. 15, 1993); Letter from Acting Assistant Attorney General James Turner to Congressman Thomas Bliley (Aug. 28, 1992); Letter from Acting Assistant Attorney General James Turner to Senator Larry Pressler (Aug. 28, 1992); Letter from Deputy Director Joan Magagna to Dr. Richard Sagall (June 11, 1992).

[5] Letter from Assistant Attorney General Deval Patrick to Senator Phil Gramm (Dec. 29, 1994). See also, Colorado Cross-Disability Coalition v. Hermanson Family Ltd, P'ship., 264 F.3d 999, 1003 (10th Cir. 2001); 49 Fed. Reg. 35,724 (1984).

[6] 42 U.S.C. §12181(9).

[7] 56 Fed. Reg. 35544 (July 26, 1991).

[8] Colorado Cross-Disability Coalition v. Hermanson Family Ltd. P'ship, 264 F.3d 999, 1003 (10th Cir. 2001). Compliance Now v. Newbury Comics, Inc., No. 02-11929-GAO, 2003 U.S. Dist. LEXIS 11883 (July 10, 2003 D. Mass.); Speciner v. NationsBank, 215 F. Supp. 2d 622, 632-33 (D. Md. 2002); Association for Disabled Americans v. Claypool Holdings LLC, No. IP00-0344-C-T/G, 2001 U.S. Dist. LEXIS 23729 (Aug. 6, 2001 D. Md.) at *89.

a dialog that the current draft bill will hopefully foster. I believe that applying an undue burden standard, however, will undermine this effort for several reasons.

First, an undue burden standard threatens the dialog between consumers and industry. VoIP and Internet-based multimedia are very new technologies that were not commonly available 5 years ago. The solutions to these problems will likely come from the innovative minds and creative developers within industry in partnership with their colleagues from the disabled community. The threat of pending and difficult litigation is inconsistent with developing the collaborative spirit that we need to get this important work done.

Second, an undue burden defense is particularly problematic when combined with other provisions of the staff discussion draft. For instance, section 104 requires manufacturers and service providers to file a written accessibility impact analysis for each product or service released to the public. Advocates can search for even the smallest area of noncompliance and then sue the manufacturers or service providers through the proposed private right of action. And, because the undue burden defense shifts the burden of proof squarely to the defendant, manufacturers and service providers will be defenseless in litigation. The end result may likely be that companies will be very reluctant to create new products and will be even more reluctant to create new categories of products (like instant messenger or two-way alphanumeric pagers) that may redefine how accessibility is provided to people with disabilities.

Third, and most importantly, I am concerned about the unintended effects to the disability rights movement by applying such a high standard to multi-billion dollar companies central to our Nation's economy. The undue burden defense has worked very well when the costs of compliance are high but still manageable. Extending the undue burden defense to multi-billion dollar IT corporations means that large IT companies would have to devote all of their profits to solving difficult accessibility problems. The problem I foresee is that Federal courts will be unwilling to go that far. To avoid that result, courts will simply weaken the definition of undue burden. Then, with a lower threshold for undue burden, other rights central to the disability rights movement that hinge on the undue burden defense will also be threatened and the overall level of accessibility in our country will go down. It will be unfortunate if the gains our society has won for people with disabilities over the last 20 years are endangered by misapplying the undue burden defense. A deaf patient can get a sign language interpreter before a risky operation because of the undue burden defense. State and local governments make their basic programs and services accessible to people with disabilities because of the undue burden defense. The undue burden defense has worked because we have used it sparingly and only where it makes sense. It has worked in other contexts because it preserves the delicate balance of disability rights laws. Using the undue burden standard here upsets that balance.

IV. Conclusion

In conclusion, I would like to express my gratitude to the Subcommittee for the opportunity to express my views. For almost my entire professional career, I have focused on improving accessibility for persons with disabilities. The Twenty-first Century Communications and Video Accessibility Act of 2008 is one of the most exciting opportunities for people with disabilities to be included in the promise of our digital era. We will fail, however, if our zeal to create more accessibility ultimately creates less. Finding the right course requires carefully balancing different approaches in light of a complex background of other civil rights laws. I commend Chairman Markey and the other members of the Subcommittee for their diligent effort at finding the right balance. I look forward to working with the Subcommittee in their efforts.

Mr. Markey. Our final witness is Sergeant Major Jesse Acosta, who has served in the United States Army since 1976. Sergeant Major is not in uniform today because he is not here in his official capacity nor is he testifying on behalf of the United States Armed Services. If he were in uniform, among the many commendations he has earned, you would see the Purple Heart, the Bronze Star, the Meritorious Service Medal. Sergeant Major Acosta has served in Iraq since 2006, where he was injured in a mortar attack. His

most severe injury was the loss of his right eye and the loss of vision in his left eye.

Sergeant Major Acosta, you represent brave men and women from across the country who have returned from Iraq with disabilities. We appreciate your service. And we look forward to your testimony.

STATEMENT OF SERGEANT MAJOR JESSE R. ACOSTA, U.S. ARMY

Sergeant Major ACOSTA. Good morning, Chairman Markey, Ranking Member Stearns, and members of the Subcommittee. My name is Jesse Acosta. I am a sergeant major in the United States Army, and I am currently still active at this point in time. As you heard, I came back from the war in Iraq completely blind. And I am here to testify on my experiences on the outside and to represent American Council of the Blind.

Let me start with this. Prior to being shipped overseas, I was a user of a Sprint wireless system cell phone. I wanted to continue to use the same provider when I came home with my injuries. And as I went to a Sprint store and asked what did you have for me that would be blind friendly so I can use and navigate that was accessible to me, a young lady came to me with a cell phone and said, Sir, right here on the number 5 key, you will find a little nub on it. You will be able to navigate. Above the 5 is a 2, on the right is a 6, on the left is a 4, on the bottom is the 8. I stood there quietly. So what about the rest? Well, it wasn't user-friendly to me. The accessibility was not there.

And by this is what I am saying is that here in the United States, the richest nation in the world, we have the technology to give us accessibility whether it be for satellite receivers, cable receivers, and televisions. Just by pressing a button on a remote control will give us that accessibility as far as a screen reader. Do we have that? No.

I own a 1984 Chrysler LeBaron. You can sit behind the wheel of that vehicle and install or place the key in the ignition, and if you do nothing, it will tell you, key is left in the ignition. Once you start the vehicle, as the vehicle is warming up, if the fluids are low, it will tell you so. If the system is not charging, it will tell you so. This vehicle is a 1984, almost 30 years old. And it just has a little chip that will describe what is wrong with the vehicle. I believe it was user-friendly to the females. I have no idea. But still, how can a vehicle talk to me and still we have components on the outside, as I mentioned, that cannot describe what is happening to us? My favorite programs, CSI: Miami, CSI: New York, and also CSI: Las Vegas, of the three, only one has descriptive audio in it. That is CSI: Las Vegas. What about the other two? I am stuck on one? No. It is not acceptable.

You know, I love watching these programs. But if there is something of essence in the program that is not being described, I have to sit quietly and wait and see what is going to be said or yell for my family members or my wife Connie, "What are they displaying on TV?" It is vital to the movie.

But what if it was something, a scroll going by? I live in California. Over there we shake, rattle and roll. We also have mud

slides. But if there was a screen going on the TV set, you know, brace yourself, we are going to have an aftereffect, we just had a 6.0 in central California, am I going to be able to read that? No. What if my family members are out shopping and there is nobody there? I won't know a thing. It is very important.

What it brings back to memory also is my child, Brittany. I remember we used to buy her electronic books. It was a standard book, but to the left side of that book, you could press a button and it would read you page by page as you went on. It would read to you and describe what was going on.

Simple little things like that, a book that costs $1.50, and we can't implement this law of accessibility? It is not acceptable.

I urge you members, Chairman Markey, Ranking Member Stearns, pass this law, make it a law. Let's not wait for it to happen. Let's not leave it to the market.

With that, that concludes my testimony. Any questions?

[The prepared statement of Sergeant Major Acosta follows:]

STATEMENT OF JESSE ACOSTA

Chairman Markey, Ranking Member Stearns, and Members of the House Subcommittee on Telecommunications and the Internet, I want to thank you for the invitation to discuss the very important topic of accessibility to communications for people with disabilities. I am honored to have this opportunity to testify on an issue that affects millions of people with disabilities. My name is Jesse Acosta, and I am a Sergeant Major in the United States Army, proudly serving our country since 1976. In June 2003, I joined the Individual Ready Reserve program and remained there until I was called to active duty in Iraq in June 2005. My unit is the 376th AG BN DET. 4, and we were mobilized in support of Operation Iraqi Freedom on August 20, 2005, where we were assigned to logistical support missions at Anaconda in Balad, which is the largest support base in Iraq. In January 2006, I received promotion to Sergeant Major. On January 16, 2006, I was wounded in a mortar attack. Among my several injuries are the loss of my right eye and loss of vision in my left eye.

As the result of my loss of sight, my journey to re-establish a normal lifestyle at times has been an odyssey. Nevertheless, I'm moving forward with all the challenges that I have had to face and will continue to do so from this point on. With today's modern technology, our lives can be made a little bit easier if our government chooses to make changes to some of our existing laws that at this point in time do very little to meet the technological needs within the blind community.

I am pleased to offer my testimony today on behalf of the American Council of the Blind (ACB), which is the largest consumer-based organization of blind and visually impaired Americans advocating for the rights of blind Americans. Comprised of more than 70 affiliates across the entire United States, the organization is dedicated to making it possible for blind and visually impaired Americans to participate fully in every aspect of American society.

As an active member of ACB, which is a founding member and steering committee member of the Coalition of Organizations for Accessible Technology (COAT), I offer my statement.

INTRODUCTION AND BACKGROUND

There are roughly 10 million individuals who are blind or who have vision loss, about 100,000 persons who are both deaf and blind, and millions of individuals with other disabilities who benefit greatly from accessible communications. In particular, I offer this testimony today in support of the thousands of veterans with vision disabilities, including those who are returning from Iraq with injuries to their eyes.

ACB affiliate members are excited by the promises of new Internet Protocol (IP) and digital technologies. Like most consumers, we look forward to the benefits of technological advances. Unfortunately, history has shown that all too often, people with disabilities have been left out or left behind as these advances have taken place.

We are in the 21st century with all this innovative technology, and yet we in the blind community have to rely on assistance from others, especially when it has to

do with accessing information through the use of consumer electronics. I own a late model Chrysler Le Baron that comes with a chip that allows you to be informed through voice output when various systems for the vehicle are in need of maintenance. If your oil is low, it will tell you so; the same applies for all other fluids. It talks to you. Why is it that a vehicle that was made almost 30 years ago has the technology that we are seeking at the present time for products like DVRs and cable boxes? This is beyond me.

The draft "Twenty-first Century Communications and Video Accessibility Act" being discussed today would be a big step forward. It would amend the Communications Act—the primary statute that addresses telephone and television products and services—to add new consumer protections for persons with disabilities. I will address several critical communications provisions in this proposal concerning vision disabilities. My colleagues on this panel are addressing other provisions found in the proposal.

ENSURING ACCESSIBLE TELEVISION FOR PEOPLE WITH VISION DISABILITIES

Today we are simply asking that television be made more accessible for persons who are blind or visually impaired. Television is a primary source of information, entertainment, and news, including local emergency information such as school closings, bad weather, and other disasters. While I enjoy television greatly—my favorite TV shows are CSI: New York and CSI: Miami—picture yourself sitting in front of your television watching your favorite program and having to guess what's happening in between the lines when it gets quiet. Is there movement on the screen, or are they displaying something of interest that you can't see that could be an integral part of the plot? Now let's say it was a crawl being displayed because of an emergency that would be something of vital interest to us all. Unless we have someone there to read to us, we will not have a clue as to what was displayed on screen. Living in Southern California can present any number of weather-related challenges. We live with fires, mudslides, and earthquakes on a fairly regular basis. So you can see what it means to all who may need this assistance. If my TV or satellite receiver had a button to utilize so that I can have the onscreen text read to me, things would be a whole lot different. Self-preservation is critical in emergencies.

We are asking you to reinstate the Federal Communications Commission's (FCC's) regulations for video description that were struck down by the U.S. Court of Appeals in 2002. And we are asking you to expand those rules in two ways. First, to ensure that video description services are transmitted and provided over digital TV technologies, since the previous set of regulations was for analog television only. As you enacted previously, nearly all television stations must broadcast digitally by February 17, 2009. Those of us who are blind or visually impaired want to be sure we can hear the video description on that day when we watch our favorite TV shows. In fact, we are also asking you to give some authority to the FCC to require video description for more than the simple 4 hours per week of programming that the old analog rules required. People who are blind or visually impaired watch more than 4 hours of television a week!

Second, and even more importantly, we are asking you to require that non-visual access to on-screen emergency warnings and similar televised information is also video described so that we too can know where to go in emergencies, what phone numbers to call and what Web sites to visit.

Primarily, what we are asking is to make sure we can use the television like people without severe vision loss. Right now, I have to ask my wife Connie to operate various features of our television for me. We want a requirement for accessible user interfaces on television equipment and controls. For instance, we want accessible on/off and volume controls and program selection for TVs and other devices that receive or display video programming, including Internet-based video programming. This could mean, for example, providing audio output for on-screen text menus that are used to control video programming functions, as well as a conspicuous means of accessing video description, such as a button on remote controls and first-level access to these accessibility features when available in on-screen menus. We would also like to have the TV programming and navigational guides accessible to people who cannot read the visual display, so that these individuals can make program selections.

TECHNICAL AND ECONOMIC FEASIBILITY

During the period in which the FCC's video description rules were in effect,[1] national broadcasters routinely demonstrated the technical and economic feasibility of description by adding this feature to their programs. With the advent of digital television, it will soon be easier than ever for broadcasters to build into the digital structure ways to pass video description along to viewers. In fact, it is imperative to immediately require that the digital television standard include video description while digital television is nascent, because the failure to do so now may lead to greater technical and economic obstacles to providing video description in the future.

CONCLUSION

It is imperative that Congress ensure that people who are blind or visually impaired—including the rapidly growing population of senior citizens who are losing their vision—are not left behind as television technologies move more to digital and Internet-based technologies.

On behalf of the American Council of the Blind, I thank the Subcommittee for this opportunity to share our concerns and urge you to introduce and pass legislation that will safeguard the consumer needs of millions of Americans with disabilities.

SUMMARY

There are roughly 10 million individuals who are blind or who have vision loss, about 100,000 persons who are both deaf and blind, and millions of individuals with other disabilities who benefit greatly from accessible communications. In particular, I offer this testimony today in support of the thousands of veterans with vision disabilities, including those who are returning from Iraq with injuries to their eyes. ACB affiliate members are excited by the promises of new Internet Protocol (IP) and digital technologies. Like most consumers, we look forward to the benefits of technological advances. Unfortunately, history has shown that all too often, people with disabilities have been left out or left behind as these advances have taken place. We are asking for the following:

- Reinstatement of the Federal Communications Commission's (FCC's) regulations for video description that were struck down by the U.S. Court of Appeals in 2002 and to expand those rules in two ways:
  - To ensure that video description services are transmitted and provided over digital TV technologies, since the previous set of regulations was for analog television only. As enacted previously, nearly all television stations must broadcast digitally by February 17, 2009. Persons who are blind or visually impaired want to be sure to hear the video description on that day. We ask also for some authority given to the FCC to require video description for more than the four hours per week of programming that the old analog rules required.
  - We ask for a requirement that non-visual access to on-screen emergency warnings and similar televised information is video described so that we can know where to go in emergencies, what phone numbers to call and what Web sites to visit.
- A requirement for accessible user interfaces on television equipment and controls. For instance, accessible on/off and volume controls and program selection for TVs and other devices that receive or display video programming, including Internet-based video programming. This could mean audio outputs for control functions and a button on remote controls for first-level access to these accessibility features on menus.
- TV programming and navigational guides accessible to people who cannot read the visual display, so that these individuals can make program selections.

Mr. MARKEY. Thank you very much, Sergeant Major. That was very powerful. Thank you.

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[1] Rules were in effect April 1, 2002 to November 8, 2002. The Communications Act of 1996 authorized the FCC to conduct an inquiry to assess the appropriate means of phasing video description into the television marketplace. Although the FCC's response to this grant of authority was a modest requirement that broadcasters and other multimedia video programming providers in the top 25 major national markets provide video description on only four primetime programming hours per week, the broadcast and cable television industries successfully pursued litigation to overturn this mandate. As a consequence, currently there are no federal requirements to make television programming accessible through video description, nor is similar access to on-screen emergency information required.

The Chair will recognize himself for a round of questions. Let me begin with you, Mr. Goldberg.

As someone with a long history with closed captioning, I would like your sense of whether the fact that a law was passed imposing an obligation—1990, 1996—and the establishment for deadlines were helpful or not in ensuring that the entire industry served the disabled community.

Mr. GOLDBERG. Yes, Mr. Chairman. Those deadlines that were imposed for developing the chip for the Decoder Act and getting on the air with captions lit a real fire under content providers and distributors of programming. We really did need that deadline, and we met that deadline through very good, concerted action by consumers, manufacturers, and program——

Mr. MARKEY. And the deadline was important?

Mr. GOLDBERG. Very important.

Mr. MARKEY. The Internet industry asserts that captioning of the Internet is technically very, very difficult for them, and it is very hard for them to figure it out. And these are the smartest technological people in America, and they say they just can't figure it out, it is very hard.

Do you agree? Is it very difficult for these geniuses in Silicon Valley, on Route 128 outside of Harvard and MIT to figure this out?

Mr. GOLDBERG. Well, I think they actually have figured it out, as you saw today on Peep. What needs to be figured out is how to make it pervasive, how to make it widespread.

Mr. MARKEY. If it is not that difficult, then what should we do to make sure there is more consistency in the marketplace? That is, that what we saw today is done uniformly across the entire marketplace? Do we need a law, do we need regulations, do we need deadlines put in place so that everyone meets the standard that you showed us on the screen today is already possible?

Mr. GOLDBERG. I think the answer is, how do you turn a low priority into a high priority.

Mr. MARKEY. You are saying it is a low priority for the industry?

Mr. GOLDBERG. Exactly. And to raise that up, there are some really good, hardworking people in these companies who need something that can help drive them to be able to accomplish what they want to accomplish.

Mr. MARKEY. Why is it a low priority for the industry?

Mr. GOLDBERG. Well, the disability market is not a market. In fact, I think it is an example of market failure. You can't wait to increase your bottom line by selling more captioning to deaf people. They don't even pay for captioning.

So there are so many other distractions and other markets to look at, it is hard for companies to agree to put the resources voluntarily. When they get together, they do good work together. We do good work together, but we all need a push.

Mr. MARKEY. So you are saying, they are so busy trying to make money that it is hard for them to turn around and say, what about all of the people with disabilities out there——

Mr. GOLDBERG. It is great——

Mr. MARKEY [continuing]. We will get to that later?

It is not that we can't do it. We could do it. It is just a low priority.

We have to make a lot more money before we get to that point, huh?

Mr. GOLDBERG. I think it is great they make that money and help invest in their disability access with some of the funding.

Mr. MARKEY. Now, Mr. Anderson, you mentioned that deaf people have a number of options to communicate using text messaging, instant messaging and paging.

With all those choices, do we need a standard for real-time text communication?

Mr. ANDERSON. Yes, we do. Because that is not a real-time standard.

Say you have a person with disability in trouble who needs to contact 911. They would have to send a whole phrase with those that we have out now, rather than sending it word by word—excuse me, letter by letter.

Mr. MARKEY. And the consequence, then, is that there is a delay in the reaction?

Mr. ANDERSON. Yes.

Mr. MARKEY. And the consequences could be catastrophic?

Mr. ANDERSON. They could.

Mr. MARKEY. Mr. Snowden, attached to your testimony is an article about handheld scanners that can turn text on photographed documents into speech. This is a wonderful device, and others like it can bring empowerment to individuals, but they are very costly. The one in the article is $2,000. How do we bring the cost down?

Mr. SNOWDEN. I think, as you have seen through any product that comes out first to market, they are usually very, very high. As we perfect it and get it out to the mass market, the prices will begin to come down.

You have seen that with HD televisions, as well. I mean, at one point you had to take out a second mortgage to be able to get one, and now they are reasonably priced. And the same will happen with these products as they go forward.

It is a great product and a great example of how the industry is actually doing what I think many people want.

Mr. MARKEY. The problem, Mr. Snowden, is, Mr. Goldberg is saying the market is not working; that is, if there had to be mass production of this device and every company had to make it, we could reduce the cost from $2,000 per item.

This goes to the whole question of the closed-captioning chip in a TV set. If you built it for only one, it is going to be very expensive. If you build it for all 27 million TV sets that are sold in the United States every year, the cost goes down to $1 per TV.

So, what would be the objection to mandating that this technology be built in? Wouldn't that result in a much lower cost per unit if all companies were required to do this?

Mr. SNOWDEN. Are you referring to the closed captioning, or are you referring to the menu option in the article?

Mr. MARKEY. The empowering technologies.

Mr. SNOWDEN. First, I would say that I don't think Mr. Goldberg was saying that all parts of the industry, all parts of the market and—there are certain parts that I am sure he would agree that

are doing well. And I think the wireless industry, by example of my testimony and the same article that you have seen, were showing that we are doing a lot in the various areas, hitting a variety of disabilities.

As we go forward, one of the things that I think is important for all of us, and particularly us as an industry, we have to keep understanding what people in the community want. And that is, you don't do that in the vacuum, you do that by meeting with the people. And I think through the many advisory committees and the TEITAC process, the HAC process and things of that nature—meeting with the COAT Coalition. That is how we learn what is important.

Mr. MARKEY. So you have heard from the community today, they want this legislation to pass. Would you work with us to draft it in a way which can pass this year, Mr. Snowden?

Mr. SNOWDEN. We have been working with the committee and the members in the room today, the advocate members in the room, for months on end on many of these issues.

We sat through a 2-year process for the U.S. Access Board's TEITAC process with many of the people in this room here, side by side, multiple hours, working through—trying to figure out the standards. And that is the important part. Before we go forward, we need to have—what are the standards as we go forward.

Larry—excuse me, Mr. Goldberg has the IC——

Mr. MARKEY. Can you help us, maybe—I don't want to keep interrupting you, but what I found in 1990 and 1992, 1996, we just had to set a deadline.

Would you help us to develop what the deadline should be so that we can just legislate that and then work out what the standard is but then with kind of a deadline for when the exam is going to have to be completed?

Mr. SNOWDEN. We will continue to work and advise and consult with this committee on anything.

Mr. MARKEY. Including setting deadlines?

Mr. SNOWDEN. If that is what this committee wants to do, that is up to you all, of course. I think our concern with setting a deadline is first understanding the technology.

Mr. MARKEY. I understand.

Here is the way I view deadlines: there are some colleges in America that don't give final exams. And that is really great for the kids that had 4.0 all the way, kindergarten through college. But for people like me, you had better have an exam, because I am not going to study until the exam is set. When you give me the deadline, I start to do my homework, right?

It is amazing how much I can learn and get done in that final couple of weeks before the exam. But if it is January and the exam is in June, I don't stop working.

That is just how human nature is, don't you think, Mr. Snowden, in general for most people? I hate to say it; it is just a sad fact of the matter.

I think, working together, we will just set deadlines; we will give people enough time. But most of these people are very, very smart, and if they work together, I think that once the deadline is set, they can find the solution. They did so with all the closed cap-

tioning, the telecommunications devices for the deaf law. Somehow or another they met every deadline.

Can you work with us to do that now in these areas?

Mr. SNOWDEN. We will always work with you. I will say that I went to a school that had set deadlines as well. So I understand your point.

Mr. MARKEY. You know what I am saying. It is like the first game of the season. You are not intensifying your efforts in April and May and June as you are in the first week of October, getting ready for it.

Let me stop here and recognize the gentleman from Florida, Mr. Stearns.

Mr. STEARNS. Thank you, Mr. Chairman. And I just want to compliment your staff and my staff also for these witnesses. They did, I think, an exceptional job of making the argument.

And, Mr. Snowden, setting a deadline like we are doing for the digital transition, February 17, 2009, I am not sure industry would have done anything without us setting a deadline. So perhaps that reinforces the argument that Mr. Markey is making, that sometimes you have to set a deadline, although Mr. Markey is also implying that if you are not working with us, we do have an alternative here, which is a hammer. So I caution him, and I appreciate him doing a draft here.

Sergeant Major Acosta, I dropped a bill, H.R. 5734, myself and Eddie Towns, a Democrat from New York, to try and determine for the blind when they are in shopping centers or they are trying to make their way in busy streets. A lot of the hybrids now are silent, you can't hear them; and we are trying to do a study to understand what is the implication, not only for people who are blind, but also for children and for senior citizens who are walking in shopping centers or anywhere else. What does it mean when all the automobiles are running so you can't hear them?

So I am very sensitive to this argument of accessibility for disabled individuals.

Mr. Anderson, I think your life story and your father's is very inspirational. And the fact that your father and you communicate even—in the face of the disability shows that you are improvising, you and your father, and it is working out through text messaging and everything. Certainly if you can, it seems like industry could, too.

So I think the argument is probably that industry's nose to the grindstone could probably figure it out. But I think, as Mr. Nakata has indicated, there is a possibility of this private right of action which enables people to sue in court for alleged violations.

And going back to what he said earlier—and we talked about this Southwest Airlines access, now Incorporated versus Southwest Airlines—he said it was a disaster for the disability rights movement.

So I hope the Chairman will obviously take that into effect, because I think what we heard today is that accessibility for Sergeant Acosta in his Sprint telephone—if he can get it from his 1984 Chevrolet, certainly we should have a Sprint telephone that he could push a button and it would tell him what to do, and it would make it accessible for him.

And for Mr. Harvard, who was very dramatic in his presentation—I compliment him; I also would vote for him an Oscar in that regard—that he makes a very, very good case for why can't he have Internet access to Internet television, or why can't he have Internet access to—when he moves into a hotel room, having support. I know when I get the remote, I can't figure out the remote; and I imagine it is even harder for people in his situation. So I think we are all sympathetic.

But it looks like this legislation, if push comes to shove, the industry probably, Mr. Snowden, can probably work some kind of compromise that is being done. Mr. Goldberg has just shown you here and there.

But it seems like—Mr. Nakata, it appears that this legislation would—this private right of action is a stumbling block. That is the way I perceive your testimony. And you might tell me again why it is a disaster for the disability rights movement, that particular decision. Is it that the industry would be apt to not do it because of the private right of action?

Now, we have a consumer protection bill that is going to be on the floor today. Tomorrow, we are having a conference with the Senate. And we have worked out language to work ourselves around this private right of action, and there has been consensus agreement on this. And I would be glad to share that language with you—my staff—because I think we can work through that.

But just give us a little bit more nuance as to why this decision with Southwest Airlines is so detrimental to the disability rights movement.

Mr. NAKATA. Thank you for that very good question.

The Southwest Airlines decision was—it was bad because of the definition of what constitutes a place of public accommodation under Title III of the Americans With Disabilities Act. I think it was originally envisioned to incorporate things that were already existing in 1990, which is really bricks-and-mortar businesses. And then, as we all know, as time goes forward, now businesses—business really takes place in large measure over the Internet.

I don't think it is a great stretch to say that we should modernize our civil rights laws and our interpretation of the civil rights laws, like the Americans With Disabilities Act, to include online business, but we are still stuck with the language of the original ADA and the regulations, which seem to tie things down to a place.

Mr. STEARNS. We are talking about updating the Americans With Disabilities Act, and you are saying, that is where it should be done. And if it could be done there, then that would be acceptable?

Mr. NAKATA. No. It is a little bit more difficult than that.

I think that we can interpret the current ADA to include online services. And the Justice Department had been making——

Mr. STEARNS. Including Sprint? Not just the Internet devices and the handheld, but also—the telephones too?

Mr. NAKATA. No, not the telephones. The ADA encompasses 12 distinct categories of places of public accommodation, which are really like private businesses—people that are open to the public, like service providers, gas stations, shopping stores, things like that. They are very broadly interpreted.

But telephone companies are more like utilities, unless you are going in to pay your bill, of course. Then that would be a place of public accommodation. It is very technical.

But the point that I was trying to make, I think those places of public accommodation are really where most of American business takes place and I think really are the goods and service providers that most of us are looking for when we think about access to American business. And I think that the current Americans With Disabilities Act could be interpreted to include a lot of online services.

The problem with the Southwest Airlines decision was that it is now being used to say, no, if you are an online business, you don't have to do anything for people with disabilities, you don't have to make your Web site successful.

Mr. STEARNS. You are saying, right now the law could be interpreted that as much as these individuals are asking for access capability for these devices, the law could be interpreted that the industry does not have to provide it because of the Southwest Airlines decision?

Is that what you are saying?

Mr. NAKATA. Yes. A lot of private businesses are using Southwest Airlines for the position that they don't have to——

Mr. STEARNS. So under the private right of action violation, if they went to court and sued, they couldn't win because of the precedent established by that case?

Mr. NAKATA. They would have difficulty, yes, because of—my point in raising the Southwest Airlines case is that if you—a private right of action—if I were in control of the world, and I could control every decision about what litigation went forward, everything would be fine in my perfect little world.

The problem is that we can't really control who is going to litigate over what. And then the Southwest Airlines case, Access Now, happened to choose very bad facts and a very bad forum, and they ended up with a very bad result. It then gets interpreted throughout the country by other courts for the proposition that Internet access doesn't have to be provided for people who are blind.

And that is tragic, in my opinion. And it was corrected to some extent by a district court opinion in California, the Target decision. But still, the Southwest Airlines case is always cited alongside Target.

Mr. STEARNS. Thank you for that explanation.

Thank you, Mr. Chairman.

Mr. MARKEY. The gentleman's time has expired.

The good thing, Mr. Nakata, is that you aren't in front of the committee in charge of the whole world when it comes to telecommunications. So your testimony is very helpful to us in trying to find a remedy for each of these problems.

The Chair recognizes the gentleman from Texas, Mr. Gonzalez.

Mr. GONZALEZ. Thank you very much, Mr. Chairman.

I guess I want to preface everything, what we are discussing here and the importance of it. And a lot of people look at the entertainment aspect of it.

What we are really discussing here, and probably the need for this legislation, is how the world communicates today—that is

what is really before us—and leaving an entire segment of our society out of the progress that is being made and setting certain standards in the way that we communicate, not just the way we entertain, but everything that is predicated on that.

If you really understand what we are trying to extend to all Americans—and that is, I believe, what Mr. Markey is attempting to do with this piece of legislation—so I want to start with the basic question about whether we need this legislation or not.

It seems to me, Mr. Nakata, that the Southwest case may very well be an argument in favor of saying that this legislation is necessary, because if we have the technology and then the Southwest Airlines of this world are readily available to do things with their Web site and such, that would allow them to have complied with what formed the basis of the private lawsuit. Is that correct?

Mr. NAKATA. Thank you for that question.

Yes, I don't disagree with the concept of this legislation. I do—I am fearful, though, that the private right of action as currently drafted, without any procedural safeguards, can eventually cause some problems.

Mr. GONZALEZ. And I understand that. And I am a great believer in private causes of action, and I understand that we have frivolous lawsuits out there and such.

But I also see many, many instances where it was a private cause of action that basically made advances across this Nation and obviously provided great opportunities for the underserved, the underrepresented, and so on. And we have to—I understand that maybe we should have some conditions, precedents and such, to safeguard against certain things.

But sometimes government moves very slowly. Regulatory agencies are really no more than political extensions of who may be in the White House, and we have had plenty of examples of that in the past 8 years where they have not been watchdogs, where they have not promoted the public interest. I think sometimes the private cause of action is the only thing left out there to our citizens.

Now, as far as the undue burden and such, the problem with readily achievable—and I am not saying that I am not open to looking at this. In your testimony under ADA, it is being defined as "easily accomplishable and able to be carried out without much difficulty or expense."

This is a different setting. What Mr. Markey is addressing here, as opposed to ADA, we are talking about technology. And I know that Mr. Snowden may want to go ahead and chime in when I finally get through here trying to pose this question.

But don't you think that we really are dealing with something entirely different? And I think that Mr. Goldberg hit on something here. Unless government spurs that kind of action and attention by the industry, it will not be addressed.

Where the visually impaired or the hearing impaired person may be the beneficiary of—and they really are the unintended consequences of, let's say, voice-to-text. Voice-to-text really—I mean, I see my lawyer friends sit there, and they impress me in the way they do it: let me show you how I am going to send this e-mail; let me show you how I am going to pull up this case; let me show you how I am going to dictate today. And they just talk into this.

Now, what is driving there is this private sector and this lawyer and other that may go ahead, and there is going to be a profit margin. But if this thing was really being driven by trying to address, let's say, someone who is impaired, it wouldn't happen.

So how do we do this? So you do agree, then—I am hopeful that you agree—this piece of legislation is necessary to direct the industry in the proper direction?

Mr. NAKATA. Personally, I very much believe that legislation like this is necessary.

I don't believe, though, that this undue burden standard is appropriate here. I don't—it was developed in an entirely different context; and the way in which it has been interpreted by the Justice Department and by the courts sets a very, very high threshold.

Mr. GONZALEZ. How do you address Mr. Goldberg's concern that if you don't have a significant segment of society out there to drive the profit margins, that it won't be addressed? At least that is the way I interpreted what Mr. Goldberg said.

Mr. NAKATA. Well, I think that there are certain other measures in the bill that I think are really great steps; for instance, making the process more transparent. I think that if there is a market failure under 255—and I am not sure that there really is, but if there is a market failure under 255—I don't think it is because we use readily achievable or we should have used undue burden as a standard, we should have included a private right of action.

I think that it really comes down to the fact that there isn't very good communication between the industry and the disability rights community; that we have heard from—I believe my colleagues from industry when they say that they have made great efforts for improving the accessibility of their products, but I also certainly have heard for a very long time the voices of the people in the disability community say that that isn't the case.

Somewhere along the line, there is a middle ground; and I think that if you make the process more transparent, for instance, manufacturers provide information in a clearinghouse of information about the accessibility of their products, that goes a long way to helping people in the disability community understand what products are out there that really meet their needs. So it is a combination of those things.

There are other steps that we could be taking, other than worrying about which legal standard we are going to hold people to or whether we are going to use a private right of action. There are lots of good things in this bill that are very positive steps, and I very much support those.

Mr. GONZALEZ. Thank you very much.

Mr. Snowden, I do want to give you an opportunity; I have a couple of minutes, but I just want to start with the basic question. We can work on the standard of undue burden. We can work on private causes of action.

Bottom line, though, do you agree that this piece of legislation is necessary?

Mr. SNOWDEN. I agree we should have some legislation. I think what we have offered in my testimony are some suggestions on how we can improve upon it, so therefore we would support it as we go forward.

When you look at the issue—when you couple private right of action and undue burden, that becomes a problem, and that is a concern for the wireless industry, particularly if you look at the various—the variety of disabilities that are out there. If you have the undue burden standard, that means everything will have to have——

Mr. GONZALEZ. And I am just saying, let's put that aside and go with what we are really trying to get at. Why would it be necessary for the United States Government, through Mr. Markey's piece of legislation, to direct the industry to address these needs?

Mr. SNOWDEN. There would have to be market failure, for one.

Mr. GONZALEZ. We are doing it. There must be a reason. We are trying to direct the industry that otherwise probably would not. And it goes back to what I think Mr. Goldberg pointed out. And I understand that.

Look, you have got business models, and you have to survive at the end of day, and we are not going to do anything that is going to bankrupt you. But by the same token, you have to direct some of your assets and some of your effort to this entire population that we were talking about, that may not constitute an appropriate market share in the perfect business model.

Mr. SNOWDEN. And I would offer that we are doing that, sir.

One of the things that I have right here in front of me, a release from AT&T yesterday, who announced new accessory parts for the iPhone; and I have over 40 phones that are offered by the same company that are hearing aid compatible. That is being done.

Our industry is not like some of the—when you look at undue burden, some of the bricks-and-mortars you are trying to build. Our business model is to sell product. If we can have products that are accessible, we sell more product. It is good for us, it is good for them.

We want to sell more product. We have a vested interest in this and a pretty good track record.

Mr. GONZALEZ. I yield back.

Thank you, Mr. Chairman.

Mr. MARKEY. Thank you. Good questions. The gentleman's time has expired.

The Chair recognizes the gentleman from Illinois, Mr. Shimkus.

Mr. SHIMKUS. Thank you, Mr. Chairman. I love this committee because technology moves faster than we can regulate. And usually, most times, that is to the benefit of all of us. So a lot of us carry around the new BlackBerry, and just because of the testimony, I wanted to see some stuff and I—so here we go. Call 911. 911 works. Calling—I am sorry; I cut in. No, the reality is, it will ring.

I have been working in the back room trying to do this voice activization stuff. A lot of people who are here know that I and Anna Eshoo and a lot of us have been involved in 911 issues for a long time, moving from—the former chairman, Chairman Tauzin, helped me move the first 911 bill for cellular communications. 911 wasn't the National phone number for cell phones. You would drive across State lines, and you would have a different number. So that shows you the power that public policy can do in public safety.

I don't want to diminish the fact of what this industry has done for saving lives. And this is an example, if—especially if a phone was designed where it was just a push-to-talk and then the individual who was disabled, like the Sergeant Major, could say, "Call mom," "Call dad," "Call Susie." Boom.

And the technology is getting there. And that is important. It is also important—I shouldn't say this in Washington, D.C., where you have got to have—you are not allowed to use cell phones, but if you have this push-to-talk, you can kind of keep it down low. No, I shouldn't—that is, not that I have ever done that before.

Mr. SNOWDEN. We have Bluetooth technology.

Mr. SHIMKUS. The other issue is, the Universal Service Fund has been mentioned. There are places in America where we still don't have cell connections. So as we move to burdening—I don't want to say—burdening is not the right—it is, where do we want our resources to go?

Especially for the disabled in rural America, being able—and enhanced 911, which is another piece of legislation passed through this Committee, to be able to—identification and location of people who are injured and harmed so that—we all know the stories of the snowy mountain pass, and someone goes off the road, and they can't be found.

Senator Clinton mentions the story about the folks out in the rowboat off of New York, and they are calling, and they are calling, and they are calling, and they can't be found because we didn't have identification locations. That is what technology has done to help improve the standard of living and the life and safety of all of us.

So sometimes I get frustrated because really we are all in this together. It is not good guys, bad guys. It is just moving us all forward, because technology improves the lives of everybody, and we really don't want anyone left behind. And technology has made it possible for the disabled to have access that was undreamed of in the past.

Now, this debate is the next iteration, which I appreciate. You learn a lot in this whole thing. I mean, I still want folks—I represent 30 counties in southern and rural Illinois; and I want to make sure that as the cell companies roll out new technologies and new services, that I get cell towers up and I get cell towers that can locate where my constituents are going off the road and can't be found. And that is—we have just got to keep that in perspective, because that is a real National part of the debate.

I am honored to have at the first panel, a sergeant major. Sergeant Major, I am a West Point graduate, a 5-year active Army infantryman, still have folks and friends deployed and will retire at the end of May with 28 years, 26 good years in the Army and the Army Reserve. So I am honored to have you here.

Sergeant Major ACOSTA. Thank you.

Mr. SHIMKUS. And we have seen the success of—I am sorry, Mr. Chairman, I did have questions, but I have filibustered.

But we have seen the success of mainstreaming, getting our disabled veterans back with their disabilities, with great pride; and I appreciate you being here to help us remember those who are vis-

ually or hearing impaired also. So for those who wanted me to ask some questions, I missed it.

So thank you.

Mr. MARKEY. The gentleman's time has expired. But Sergeant Major Acosta, if you would like to respond to Congressman Shimkus, I think we would like to hear your comments.

Sergeant Major ACOSTA. Yes. On this demonstration you gave on the BlackBerry, I mean, without being a little facetious here, I would like to get a hold of it to see is it really accessible to me, number one. And you touch a very delicate subject in my new arena of being blind and going through all my trials and tribulations with my injuries, setting aside my blindness: the VA. We really need to work there; we definitely need to work there.

I have acquired most of my schooling not through the VA. And this subject is not about the VA, but I had to go to a private school to learn how to be—learn the technology, what is accessible to me. And still, even in that school, they are years behind the times.

But the BlackBerry, introduce it. I would love to see that work. But I bet you one thing, once I get a hold of it and I try to navigate through that, I am going to need some assistance.

Because what I am trying to say here is that if you turn on the system, it should already be speaking to you, if you choose to have descriptive—a voice to you or not. But without that, it is not going to work for me.

Mr. SHIMKUS. And, Sergeant Major, I appreciate those comments, and we need to follow up with the veterans, especially with handicap issues. And that is another committee, but we can talk to our colleagues on that.

And I would ask—I think that the reality is, if we had a huge, one button, a push-to-talk system—and I don't know if technology is there. But it is—I mean, I had to look—I understand that.

But I think technology can get there, and we need to—instead of blaming, we need to continue to work together to solve these hurdles. And I think—I believe in innovation and technology and that we can get there.

Thank you, Mr. Chairman.

Mr. MARKEY. I thank the gentleman.

And for Sergeant Major Acosta, first he would have to be able to put in mom's name, dad's name, and Susie's name and do that himself before he could use it, voice activated; and I don't think he can do that.

Mr. SHIMKUS. Unless he worked with the Veterans Administration——

Mr. MARKEY. Hold on a second.

I am just saying with the companies, if they made it easier for him to be able to input the information and then it had the audio capacity—all I am saying is, we could say to the companies, if you added these extra features, then Sergeant Major Acosta could use it like you do, a sighted person, because he would have been able to input other information as well that makes it easy for him to do it.

The gentleman's time has expired.

The Chair recognizes the gentlelady from California, Ms. Capps.

Ms. CAPPS. Thank you, Mr. Chairman. I agree with Mr. Stearns that the two of you really brought together an excellent panel today. I really appreciated the testimony of each of you.

I want to pick up on my colleague from Texas, Mr. Gonzalez, talking about—we are not talking simply about leisure time and entertainment, as valuable as those topics are. We are talking about lifesaving, we are talking about economic opportunity, we are talking about a whole range of issues.

And Mr. Acosta, Sergeant Major—Sergeant Major Acosta, first of all, thank you so much for your service to the country. And I am just marvelling at what you have had to get used to, being sighted all your life, being injured in war and rehabilitation and all of the issues that you just discussed.

I am not going to continue there, as interesting as that is. I am a nurse, and I would very much like to talk about those experiences with you. But I want to focus on where we both live, which is southern California.

We are sort of disaster prone in our area. That is putting it lightly. And you talked about the earthquake just the other day. Can you—I want to expand a little bit about whether or not you have gone through the experience of being left out of emergency notifications.

How is it to live there for you, particularly now, with the technology that is increasingly making such a huge gap between those with the use of all their senses to get all of this kind of instant rapid information and then the population that you now are a part of, who must certainly feel left behind?

Sergeant Major ACOSTA. Thank you for the kind words, ma'am. Living in southern California, one of the best States in the Nation——

Ms. CAPPS. Well, yes.

Sergeant Major ACOSTA. Thank you very much. And I will take the shake, rattle and roll anytime.

But, you know, ma'am, still, with these laws that have been passed, it has been tremendous for some of us who are disabled, although—I have been educated for the past 2 years, but for my first 48 years I was not blind, and now that I have lost my sight, guess what? I see 20/20, clearly, what is going on around our Nation here when we—I say "we," the blind community—has been left out.

To answer your question as to what happens in a case of disaster, that is my answer, ma'am. There is nothing I can see on TV or get to a button to tell me what is going on.

Ms. CAPPS. Let me—to anticipate how you are feeling, when we hear how bad the fire season is going to be this year in southern California, it must make you a little edgy to anticipate how you are going to behave when the evacuation plan is scrolled across the television and everybody is dashing around getting ready to evacuate, and you are kind of confused.

Sergeant Major ACOSTA. Yes, ma'am. Well, you know, I stand a better chance swimming out in the ocean and people yelling there is a shark than trying to get the information from the TV or the radio.

So, ma'am, it is going to be tough.

Ms. CAPPS. It is going to be tough.

Sergeant Major ACOSTA. It is going to be tough. But I will endure whatever comes my way. I am an American. I am a warrior. I am never going to give up. This is going to be one of my new plights in life.

Ms. CAPPS. I am so pleased that your leadership is so evident, and your ability to mobilize, I believe, is going to be very, very powerful within this new world that you are conquering. We just want to be able to help you as best we can.

I will turn now—reluctantly, a little bit—to ask Mr. Snowden a question. You were eager to respond before.

I want to find out from you whether CTIA or its members have considered adopting a universal design policy. And that would be, I understand, where devices are manufactured from the outset to include necessary accessibility features, rather than waiting until they are going to be challenged either in the courts or from a legislation that comes and then has to be added onto it.

If you don't use universal design, isn't the end result a category of devices that are, quote-unquote, "good enough" for the folks with disabilities—barely good enough? How do we tell Mr. Acosta or Mr. Russell that they only get to choose from a select three or four of the hundreds of cell phone models available?

Tell me a little bit about your industry's response to universal design requirements.

Mr. SNOWDEN. First, I would like to say to the Sergeant Major, the situation he had with the store was unfortunate in that—it is really unfortunate on two accounts. One is his personal experience, and the second one is, we lost an opportunity to keep a customer happy. And that particular issue, Sprint has phones that are—you can talk into and they will—voice dialing and——

Ms. CAPPS. Tell me a little bit about universal design, because I am already on the red light.

Mr. SNOWDEN. No problem at all. Some companies have looked at this, particularly AT&T has a policy—if you go to their Web site, we can get you that information—on universal design.

Ms. CAPPS. What is the policy?

Mr. SNOWDEN. Actually, I will let AT&T speak to that versus me speaking to it, if that is OK with you, ma'am.

But one of the challenges we have overall, when you look at universal design, is, do you make a single product for the deaf, hard of hearing, low vision, blind, deaf-blind, and cognitive consumer. Is there one product for that?

One product that may be good for someone who is deaf may not be good for a consumer who is blind. And that is one of the challenges that we have as you look at the issue of universal design.

As we go forward, we want to have products that can fit multiple consumers. No one consumer with a disability or without a disability wants a single type of product; they want multiple choices. I read to you a moment ago from this press release: there are over 40 different HAC-compliant telephones. So that is more than just a few. That is not casting anything aside. That is a bevy of choices that consumers have.

Ms. CAPPS. My time is up. I apologize. Thank you.

Mr. MARKEY. The gentlelady's time has expired.

The Chair recognizes the gentleman from Washington State, Mr. Inslee.

Mr. INSLEE. Thank you.

Mr. Nakata, you made reference to some possible procedural safeguards for private right of action. Could you elaborate on what you might refer to?

Mr. NAKATA. I don't necessarily advocate that we—that we follow any one of these. But I think there are different options that we can pursue.

For instance, having an exhaustion of administrative remedies would enable the FCC, which has particular expertise on this issue, to vet the complaint or at least process a complaint, try to understand it before a person can just march into Federal court and sue any manufacturer.

So that is a possibility. And I think that might make sense if there is a fairly short time limit that the FCC is given. So, that way, a plaintiff wouldn't be denied his day in court.

Mr. INSLEE. You have made some reference to the readily achievable standard as opposed to the undue burden language. I want to ask you how that would apply to the situation where we see frequently, where new business whiz-bang technology—much of it developed in my district, thankfully—great technology, but particularly in its early stages does not take into account access issues. We have seen that with DVI and HDMI, where we have seen a loss—you know, increased technology but decreased access.

How would either of those two languages or other parts of this bill make sure that during the early stages of the design of these future technologies, we keep access without stifling innovation?

Mr. NAKATA. That is a really good question. Thank you for asking that.

Say a company is trying to release a product. There are lots of business decisions they have to make such as ship cycles and development cycles that go into whether they are going to release a product. It involves the—the difficulty that is involved are factors that are taken into consideration under both readily achievable and undue burden. It is more than just cost.

But I would say that if the company were thinking about releasing a product and were looking at a readily achievable defense, the question then becomes, have they thought about accessibility? Have they put in place a plan to address accessibility? Have they assessed how much it is going to cost them in order to do it? How difficult is it going to be for them to do it? And how is that going to be phased into the development cycle, so that maybe it might not be in V1, but it might be in V1.01 or 1.2?

So, by contrast, if it is an undue burden defense, it really is all or nothing once it is released, because you are looking at the way in which undue burden has been shaped by the interpretations of the Justice Department and the courts, it really is looking at the overall resources and whether it would create an impact on that—a substantial impact on those overall resources of the company.

And if you are talking about a company, a large company, say, like Microsoft, that has—a multibillion dollar company, it can really be a show-stopper. And that is unfortunate to me because—to follow up on a totally different conversation, but I think it is some-

what related to this—I think that there are areas of technology where they favor particular groups of people with disabilities.

And I think one of the interesting examples is the BlackBerry—well, the predecessor of the BlackBerry, the alphanumeric pager or instant messaging technologies, both of which are really now so heavily used in the deaf community. And until fairly recently, those technologies were completely inaccessible to people who were blind, and they would probably not even come to market.

Mr. INSLEE. Right. As we go through this, I just hope all of us who are not in the disability community realize that we are all just in the temporarily-abled community, too, as we go through this. That is the way I look at it.

Sergeant Major, do you ski? Do you downhill ski?

Sergeant Major ACOSTA. No, sir. I think if I tried it, I will injure myself some more.

To be honest with you, I would love to do the luge, and everybody thinks I am crazy. That is the one where you lay down and go 100 miles an hour. That's me, sir.

Mr. INSLEE. Well, if you are crazy, you have come to the right place, certainly.

I just want to invite you up. My son works with a group called Outdoors for All, and they help blind, quadriplegic, everything you name, to ski and kayak and bike. Come on up to Washington State. We will set you up. You will be a luger or a downhill skier.

We will talk when we are done here. I will get you up there.

Sergeant Major ACOSTA. Thank you. Thank you.

Mr. MARKEY. The gentleman's time has expired. There is interest on the part of members to ask additional questions. This panel is so outstanding.

So at this point, I will recognize once again the gentleman from Florida, Mr. Stearns.

Mr. STEARNS. Thank you, Mr. Chairman.

Mr. Snowden, you heard from Sergeant Major Acosta saying that the device for cell phones needs to be enabled, and you have heard from Mr. Anderson that his dad should be able to go on the Internet and be able to do video access to cable and television. Even at draft picks or things like that, his father wants to have the access.

You heard Mr. Harvard talk about the remote control when he walks in.

Is industry moving, in your opinion, to solve these three specific examples they have given today?

Mr. SNOWDEN. I would say, yes, in some respects, particularly for the Sergeant Major, that issue has been solved. And we have devices now—I mentioned—Sprint has—all of the carriers have these devices that are made by Motorola and Nokia and all of our other members. So that issue has been taken care of.

As we look through the closed-captioning issue that I know Mr. Goldberg has mentioned, we are working with the industry—the industry is working with Mr. Goldberg on this ICF, this forum that he is a part of, to work this aspect.

In addition, we have worked through the U.S. Access Board and through the TEITAC advisory process on a lot of these issues.

So, ongoing conversations are happening right now to figure out, how do we move this from where we are today to where we want to be tomorrow.

Mr. STEARNS. How long will it take where all three of these individuals, their problems are solved, so there is universal application to, wherever they go, they can get it? When do you think that will occur?

Mr. SNOWDEN. I think if I had that answer, I would be in Vegas, not sitting here right now, with all due respect.

Mr. STEARNS. Let me also ask you. The community has a Telecommunications, Electronic, and Information Technology Advisory Committee. Maybe you could talk about some of the efforts between industry and the disability community, how productive they have been, and maybe some of the things you are doing, so we can understand your efforts in this area.

Mr. SNOWDEN. I can tell you that speaking on behalf of—I was a member of the Federal Advisory Committee. At times it was daunting, at times it was frustrating, at times it was exhilarating. But a lot of good work went into that, and the recommendation just went to the U.S. Access Board, I believe on April 3rd, for them to now take it from there.

It was a good experience. It was a healthy experience. I think it was a fruitful experience for industry, for all aspects of the community to come together to figure out how do we work on these issues. I will tell you that I am always amazed by the doggedness of the disability community. There were e-mails flying at 3 and 4 o'clock in the morning on these various issues, because these are important issues. And I think as Mrs. Capps mentioned earlier, these aren't just, "I want to watch a movie." These are about jobs. This is about the economy. This is about making sure they are a successful part of our economic structure. That is why I think it is important, and that is why we took it seriously as well.

Mr. STEARNS. I just conclude. I think your organization, you might want to contact Sprint and ask them to give him, the Sergeant Major here, the phone that he needs. If you are saying it is already capable and we have this capability, then he shouldn't have had that experience, and perhaps they can contact and give him this capability. And likewise, if you see this capability for Mr. Harvard that they could provide that kind of service, too, as we follow up.

Mr. SNOWDEN. I have given Mr. Harvard my card, and I will make sure I give it to Mr. Acosta as well. And I am sure someone is here in the audience from Sprint. His issue will be taken care of.

Mr. STEARNS. Thank you.

Mr. SHIMKUS. Will the gentleman yield real quick?

Mr. MARKEY. Sure.

Mr. SHIMKUS. We would ask the Sergeant Major once he receives that, to give us feedback on if it works as advertised. Sergeant Major, you will do that, won't you?

Sergeant Major ACOSTA. Yes, sir.

Mr. SHIMKUS. I know you are shy, but I have never known a Sergeant Major who has been shy.

Sergeant Major ACOSTA. Sir, I just want to be able to reach out and touch.

Mr. SHIMKUS. So do we.

Mr. MARKEY. Would the gentleman be interested in joining Sergeant Major Acosta in going down the luge? Would you be interested in that?

Mr. SHIMKUS. If the Sergeant Major goes—officers always follow the senior enlisted men. Good officers always follow the enlisted men.

Mr. MARKEY. I think we have a deal here. Let's see if we can't put this together.

Mr. SHIMKUS. The Chairman just wants to get rid of me for a couple of days.

Mr. MARKEY. But not forever. So be safe. Be safe. The Chair recognizes the gentleman from Texas, Mr. Gonzalez.

Mr. GONZALEZ. Thank you, Mr. Chairman. And I appreciate the additional minutes. I did want to follow up with Sergeant Acosta. And Sergeant Acosta, I am from San Antonio. And, of course, we have got Fort Sam Houston, Brooke Army Medical Center, and the Center for the Intrepid, with which I know you are probably really familiar. And I was with Secretary Peak of Veterans Affairs, retired General Peak. And I can just tell you the sensitivity is out there on all of the issues about that you are pointing out.

When we took the tour of the Center of the Intrepid—which by the way, was built with private funds, even though it is on Federal property and next to the Brooke Army Medical Center—in the tour itself, we actually went into a room where there was an Air Force sergeant and his wife, who was undergoing training by a representative from—I don't remember which company—but it was really kind of voice-to-text. They had a computer there. They had a laptop and such.

General Peak at that time expressed a great interest in, you know, who are you—the tutor—where are you from? I mean, are you Army, are you wherever? It really was private sector representative from another State representing a certain product and a service. So we know that is going out there—going on out there.

Then General Peak also expressed a great interest in the transition that you were talking about, when that Air Force sergeant is separated from Active Duty. And what we are trying to do for him that we didn't do for you—because you said no one at VA helped you with the technology and such. That is going on, but my fear is it is probably more on the private side, private property premises and so on. And General Peak was very interested about the transition. So I am going to bring your case to his attention and maybe put you all in contact so you can maybe express it in your own words.

My only observation would be that I think what was being made available to that Air Force sergeant is probably pretty limited. And the purpose of this bill is to expand what would be available to everyone out there, including our men and women that are coming back, that are obviously suffering the injuries in the nature that you have experienced yourself. I just want to say thank you for your service. I don't want you to think that the VA is not out there. I have known General Peak for a number of years. And as I have

said, I am definitely going to make your observation made known to him. And I wanted to share my experience wherein I have viewed actual training and preparation of someone who was blinded in Iraq. It may have been Afghanistan. I did not ask the sergeant. But, nevertheless, just to address that particular observation you made that we are trying and we just need to try a lot harder.

Again, thank you for your service. And, Mr. Chairman, I yield back.

Mr. MARKEY. Sergeant Major Acosta, would you like to respond to Congressman Gonzalez?

Sergeant Major ACOSTA. Yes, sir. Thank you very much, sir, for addressing this. Yes, I have had my trials and tribulations. But what is good for me is good for the rest of my brothers and sisters coming home and even our past warriors who have served our Nation, to include those Vietnam vets, Korean vets and World War II vets who still want to be in touch with the outside. And I am talking about, of course, our blind community. We are growing. We are not shrinking whatsoever. But, please, keep me in touch, sir. I do appreciate that, because I have started my own advocacy called the TAV, which means Thank A Vet. You love your freedom, you thank a vet. Thank you.

Mr. MARKEY. I thank you, Sergeant Major, very much. Mr. Nakata—the Chair will recognize himself for—does the gentleman from Illinois have any other questions?

Mr. SHIMKUS. I just had a brief one. It was going to go to Mr. Nakata anyway.

Mr. MARKEY. I will recognize the gentleman from Illinois.

Mr. SHIMKUS. Thank you, Mr. Chairman. Our real goal here, I think, is to facilitate the cooperation between industry and the disabilities community to solve access issues. In your opinion, how best can we do that?

Mr. NAKATA. I think that what we have heard today is that there really is this big disconnect between the disability community and industry. There are products that our manufacturers are apparently developing, yet, people aren't finding out about these things. And if there is some way in which we could provide a middle ground where we can have a clearinghouse for information that is proposed in the bill, I think that that would do wonders and would actually shed light on a lot of the good things that are being done and avoid a lot of these problems.

Mr. SHIMKUS. Mr. Chairman, that is really the last one I had. So I thank you.

Mr. MARKEY. I thank the gentleman. By the way, I am going to ask a couple of questions here, and then I am going to ask each one of you to give us the 1 minute you want us to remember from your testimony. So think about that while I am asking a couple of questions right now, and we will come back to you for that.

Mr. Nakata, just to clarify, you are saying that you believe the legislation is necessary, but you think that the private right of action may need procedural safeguards; is that correct?

Mr. NAKATA. Yes. And the undue burden also is problematic. I am definitely in favor of legislation. As a former Justice Department attorney, I am very much in favor of that.

Mr. MARKEY. And would enforceable deadlines help, as Mr. Goldberg has testified?

Mr. NAKATA. I think that they would, although I think you would have to consult with industry——

Mr. MARKEY. What I am saying, once we consult——

Mr. NAKATA. Yes, I think deadlines do help.

Mr. MARKEY. But you have to have a deadline on consulting with industry, too, on creating a deadline, if you understand what I mean. There is really a chicken-and-egg problem there because you could drag out that whole process of creating the time for the deadline until eternity.

[Whereupon, at 11:36 a.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

STATEMENT OF HON. JOHN D. DINGELL

Today draft legislation will be examined seeking to modernize current laws governing access to communications for individuals with disabilities. The last time we enacted legislation concerning access for those with disabilities in 1996, television was only broadcast in analog and voice communications relied primarily on wireline phones.

From a technological standpoint, the world has changed a great deal since then. The Internet now figures prominently in communications. Voice over Internet Protocol, or VOIP, service, texting, and instant messaging are just some of the new ways we communicate. Mobility and the use of data in communications are additional hallmarks of this new generation of services. One cannot walk down the hallways of this building without seeing someone texting on their BlackBerry. Similarly, the world of video programming has also evolved. We are in the midst of a transition to all-digital television. Content providers have discovered a new source of viewers and revenue by putting their content on the Internet.

Though technology has rapidly evolved, our core values should remain constant. The principle of universal service has been part of our communications policy since the early part of the last century. In my view, however, service cannot be termed universal unless it can be accessed by all. It is necessary and proper that everyone has access to our communications infrastructure, including the next generation of communications and video programming.

I am sure there will be lively discussions about the best way to ensure universal accessibility of communications. Our telecommunications industry, including service providers, manufacturers, and content providers, can each point to one or more applications or devices that contain accessibility features, and I am encouraged by these efforts. In my experience, if we simply ask the innovators and engineers to ensure that technologies are designed to include all persons, no matter how they communicate, they are up to the task.

I welcome the witnesses who appear at this hearing. Thank you in advance for sharing your views on this draft legislation. I especially wish to commend Sergeant Major Acosta for his service to our country. Sgt. Maj. Acosta, his family, and countless others like him have sacrificed much for our Nation, and I am particularly interested in learning how this legislation can help him and others enjoy a fuller and more productive life.

STATEMENT OF HON. EDOLPHUS TOWNS

Thank you, Chairman Markey and Ranking Member Stearns. I am very pleased that the Subcommittee is holding this hearing. Our constituents will be proud that we are looking for ways to improve access to new communications and media technology for Americans with disabilities. Universal access would expand markets and allow everyone to benefit from all the entertainment, educational, and health care rewards that the Internet has to offer.

Because I have worked with the disabled community for a long time, I would like to congratulate the Chairman and Ranking Member for their dedication to the disabled and for their efforts at making this legislation a success. I welcome and thank the witnesses, because this hearing will provide important information for us to im-

prove this bill. I have always believed that how well we address the needs of those with disabilities is a measure of our quality as a Nation.

I would like to acknowledge the progress that the technology industry has made up to now to make their products accessible to those with disabilities, and I share their concerns about how to make this bill enforceable while still maintaining incentives for innovation. Thanks to innovative VOIP technology, we are now able to communicate around the globe with a combination of sign language over video, real-time text, and wide-band audio. Many companies are including accessibility packages as options on their products and offering help lines to assist with using their products. However, there is still a long way to go, and I am glad the industry is willing to work with the disabled community to make it happen.

Thank you and I yield back the balance of my time.

STATEMENT OF HON. ANNA G. ESHOO

Mr. Chairman, thank you for holding this hearing to address important issues related to access to modern communications for all Americans.

Our Subcommittee has discussed the idea of "openness" on several occasions. Openness can mean Net Neutrality, open access, competition, or accessibility.

We can't have a truly open Internet if it is not accessible to everyone.

The rate of technological innovation has left some consumers behind, and this bill aims to bridge that divide.

As a nation ,we've made important legal and policy decisions to make our workplaces, our communities, and our communications infrastructure accessible to all our citizens.

I believe this draft is an important instrument to begin the dialogue on how best to pursue openness and accessibility for all consumers.

I'm eager to listen to today's witnesses and understand their perspectives on this bill, and I thank you, Mr. Chairman, for holding this important hearing.

STATEMENT OF HON. BART STUPAK

Thank you, Chairman Markey, for holding this hearing on the "Twenty-first Century Communications and Video Accessibility Act of 2008."

I appreciate the Chairman bringing our attention to the unfulfilled needs of our deaf and blind community when using today's telecommunications technologies.

This legislation seeks to clarify any confusion on the responsibilities of the private sector to meet the needs of the hearing and visually impaired community.

Obvious problems, such as a lack of effective captioning on the Internet, are often neglected as technology continues to rapidly grow and evolve.

However, clear direction from the Federal Government on what standards the private sector should work to meet can address this.

This legislation includes an important provision to update requirements for video programmers to continue to be integrated with the Emergency Alert System.

Without a fully integrated video distribution system for emergency alerts, we run the risk of having a national alert that doesn't reach millions of Americans.

There is no good reason that the technology is too advanced to address the simple problems. Especially when dealing with the safety of the American people.

It is important that clear rules are established to ensure accessibility as people begin to watch more of their TV on the Internet and other non-traditional sources.

By providing clear direction from the Federal Government, new innovations by the industry can better meet the needs of the community.

Mr. Chairman, thank you again for holding today's hearing. I look forward to hearing from our witnesses on how we can better improve our telecommunications infrastructure to serve the deaf and blind community.

ELIOT L. ENGEL
17TH DISTRICT, NEW YORK

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STATEMENT

BY
CONGRESSMAN ELIOT ENGEL, OF NEW YORK

TO
SUBCOMMITTEE ON TELECOMMUNICATIONS AND THE INTERNET

FOR HEARING ON
ENHANCING ACCESS TO BROADBAND TECHNOLOGY AND SERVICES FOR PERSONS WITH DISABILITIES

May 1, 2008

Chairman Markey, Ranking Member Stearns--

Thank you for holding this important hearing today.

Technology is something that we all take for granted these days. Only 10 or 15 years ago, about the most technology that I was exposed to was the television. Now, I can turn on my digital television and watch a show that I recorded on my Tivo. Then I can check the weekend weather online, check e-mails on my

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blackberry, make calls on my cell phone, and do any number of things I couldn't do when I first came to Congress.

Unfortunately, there are millions of Americans who cannot take advantage of the technology that I and many others in this room use every day.

I strongly support companies providing technologies and services to the public. However, less than one percent of the population suffers from severe hearing loss or vision loss. And though that sounds like a small number, up to a million people cannot hear what I am saying right now, and about 1.3 million people are legally blind. They are prevented them from using the same technology that I use every day without even thinking about it.

The problem is that the free market will often not update its technology to provide access to one percent of the market. And this is why we're here today. The last time we passed legislation mandating accessible technologies was in the 1996 Telecommunications Act. The technological advancements that we have made in the past 12 years are staggering. Cell phones, blackberries, the Internet, these are all becoming ubiquitous technologies. It's becoming harder and harder to live without them.

Now, I'll be the first to say that part of the reason we have seen such an explosion in technology is because Congress allowed companies to create these innovations, and we didn't get in the way. Once we start micromanaging how companies should do business, we can just get in the way. However, it is our job to ensure that all Americans are treated fairly and equally.

I look forward to hearing from these witnesses today. It looks like an excellent pane, and I am very interested to hear everybody's story today. I would particularly like to hear from you

about what barriers you experience in accessing technology, and what you need to get better access to this technology. I am confident that all of us up here want to see everybody be able to take advantage of the amazing technological advancements we have made. So I would like to hear what you would like us to do to further that goal.

Once again, I want to thank you, Chairman Markey, for holding this hearing today. Obviously this is a topic that we need to address, and I am happy that we could meet here today with such a distinguished panel of witnesses. I yield back the balance of my time.

[STAFF DISCUSSION DRAFT]

APRIL 25, 2008

110TH CONGRESS
2D SESSION

H. R. _____

To ensure that individuals with disabilities have access to emerging Internet-based communication and video programming technologies in the 21st Century.

IN THE HOUSE OF REPRESENTATIVES

M__. _____ introduced the following bill; which was referred to the Committee on _____

A BILL

To ensure that individuals with disabilities have access to emerging Internet-based communication and video programming technologies in the 21st Century.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Twenty-first Century Communications and Video Accessibility Act of 2008".

(b) TABLE OF CONTENTS.—

Sec. 1. Short title; Table of contents.

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TITLE I—COMMUNICATIONS ACCESS

SEC. 101. DEFINITIONS.

Section 3 of the Communications Act of 1934 (47 U.S.C. 153) is amended—

(1) by adding at the end the following new paragraphs:

"(53) DISABILITY.—The term 'disability' has the meaning given such term by section 3(2)(A) of the Americans with Disabilities Act of 1990 (42 U.S.C. 12102(2)(A)).

"(54) INTERCONNECTED VOIP SERVICE.—The term 'interconnected VoIP service' has the meaning given such term by section 9.3 of the Commission's rules (47 CFR 9.3).

1 "(55) INTERNET-ENABLED COMMUNICATION
2 SERVICE.—The term 'Internet-enabled communica-
3 tion service' means—
4 "(A) an interconnected VoIP service; or
5 "(B) a transmission service between or
6 among points specified by the user, of informa-
7 tion of the user's choosing, using the Internet
8 protocol (or a successor protocol) if such trans-
9 mission is for the purpose of enabling bilateral
10 or multilateral voice, text, or video communica-
11 tion, utilization of interactive voice response or
12 voice mail systems, or other similar communica-
13 tions-based applications, and uses—
14 "(I) an Internet connection from the
15 user's location; and
16 "(ii) customer premises equipment
17 that is compatible with the Internet pro-
18 tocol (or a successor protocol)."; and
19 (2) by reordering paragraphs (1) through (52)
20 and the paragraphs added by paragraph (1) of this
21 section in alphabetical order based on the headings
22 of such paragraphs, and renumbering such para-
23 graphs as so reordered.

1 **SEC. 102. HEARING AID COMPATIBILITY.**

2 (a) AMENDMENT.—Section 710(b)(1) of the Commu-
3 nications Act of 1934 (47 U.S.C. 610(b)(1)) is amended—

4 (1) by striking "and" at the end of subpara-
5 graph (A);

6 (2) by inserting "and" after the comma at the
7 end of subparagraph (B); and

8 (3) by inserting after subparagraph (B) the fol-
9 lowing new subparagraph:

10 "(C) all customer premises equipment used to
11 provide an Internet-enabled communication service
12 that provides voice communication via a built-in
13 speaker (typically held to the ear) and that are man-
14 ufactured in the United States (other than for ex-
15 port) more than one year after the date of enact-
16 ment of the Twenty-first Century Communications
17 and Video Accessibility Act of 2008 or shipped in
18 interstate commerce in the United States more than
19 one year after such date,".

20 **SEC. 103. RELAY SERVICES.**

21 (a) DEFINITION.—Paragraph (3) of section 225(a) of
22 the Communications Act of 1934 (47 U.S.C. 225(a)(3))
23 is amended to read as follows:

24 "(3) TELECOMMUNICATIONS RELAY SERV-
25 ICES.—The term 'telecommunications relay services'
26 means telephone transmission that provides the abil-

1 ity for an individual who is deaf or hard of hearing
2 or who has a speech disability to engage in commu-
3 nication by wire or radio with one or more individ-
4 uals, in a manner that is functionally equivalent to
5 the ability of a hearing individual who does not have
6 a speech disability to communicate using voice com-
7 munication services by wire or radio.".
8 (b) INTERNET-BASED TELECOMMUNICATIONS
9 RELAY SERVICES.—Section 225 of such Act is further
10 amended—
11 (1) by inserting "BY COMMON CARRIERS" after
12 "PROVISION OF SERVICES" in the heading of sub-
13 section (c);
14 (2) by redesignating subsections (e), (f), and
15 (g) as subsections (f), (g), and (h), respectively;
16 (3) by inserting after subsection (d) the fol-
17 lowing new subsection:
18 "(e) INTERNET-BASED TELECOMMUNICATIONS
19 RELAY SERVICES.—
20 "(1) PROVIDER OBLIGATIONS.—Within one
21 year after the date of enactment of the Twenty-first
22 Century Communications and Video Accessibility
23 Act of 2008, each interconnected VoIP service pro-
24 vider and each provider of Internet-enabled voice
25 communication service shall—

1 "(A) provide, throughout the area in which
2 it offers such service, telecommunications relay
3 services, individually, through designees,
4 through a competitively selected vendor, or in
5 concert with other carriers, providers of Inter-
6 connected VoIP services, or providers of Inter-
7 net-enabled voice communication services; and
8 "(B) participate in and contribute to the
9 Telecommunications Relay Services Fund estab-
10 lished in section 64.404(c)(5)(iii) of the Com-
11 mission's regulations (47 CFR
12 64.404(c)(5)(iii)), as in effect on the date of en-
13 actment of such Act, in a manner prescribed by
14 the Commission by regulation to provide for ob-
15 ligations of such providers that are consistent
16 with and comparable to the obligations of other
17 participants in and contributors to such Fund.
18 "(2) RULE OF CONSTRUCTION.—Nothing in
19 this subsection shall be construed to limit the au-
20 thority of a State to regulate its certified State oper-
21 ated telecommunications relay program, including a
22 program that employs the use of Internet-based
23 relay services.";
24 (4) in subsection (f)(1) (as redesignated by
25 paragraph (2) of this subsection), by striking "sub-

1 sections (f) and (g)" and inserting "subsections (g)
2 and (h)";
3 (5) in subsections (h)(1) and (h)(2)(B) (as so
4 redesignated), by striking "subsection (f)" each
5 place it appears and inserting "subsection (g)".

6 **SEC. 104. ACCESS TO INTERNET-BASED SERVICES AND**
7 **EQUIPMENT.**

8 Title II of the Communications Act of 1934 (47
9 U.S.C. 201 et seq.) is amended by inserting after section
10 255 the following new section:

11 **"SEC. 255A. ACCESS TO INTERNET-BASED SERVICES AND**
12 **EQUIPMENT.**

13 "(a) MANUFACTURING.—A manufacturer of equip-
14 ment used for Internet-enabled communication services,
15 including end user equipment, network equipment, and
16 software, shall ensure that the equipment is designed, de-
17 veloped, and fabricated to be accessible to and usable by
18 individuals with disabilities, unless the requirement of this
19 subsection would result in an undue burden.

20 "(b) SERVICE PROVIDERS.—A provider of Internet-
21 enabled communication service shall ensure that its service
22 is accessible to and usable by individuals with disabilities,
23 unless the requirement of this subsection would result in
24 an undue burden.

1 "(c) REAL-TIME TEXT SUPPORT.—In order to facili-
2 tate seamless real-time text communication between inter-
3 connected VoIP service or Internet-enabled communica-
4 tion service and telecommunications services, real-time
5 voice and text conversation products and telecommuni-
6 cations services shall at a minimum, use the standard real-
7 time text conversation format for the transport technology
8 used by the product or service, unless the requirement of
9 this subsection would result in an undue burden. All real-
10 time text communication formats shall, in order to ensure
11 accurate transmission, have less than one percent char-
12 acter error and be transmitted as text data, not audio
13 tones.

14 "(d) COMPATIBILITY.—Whenever the requirements
15 of subsections (a), (b), and (c) constitute an undue bur-
16 den, such manufacturer or provider shall ensure that the
17 equipment or service is compatible with existing peripheral
18 devices or specialized customer premises equipment com-
19 monly used by individuals with disabilities to achieve ac-
20 cess, unless the requirement of this subsection would re-
21 sult in an undue burden.

22 "(e) NETWORK INTERCONNECTION.—Each provider
23 of Internet-enabled communication service has the duty
24 not to install network features, functions, or capabilities
25 that do not comply with the regulations established pursu-

1 ant to this section. The real-time text data formats of all
2 interconnected VoIP services and Internet-enabled com-
3 munication services established pursuant to this section
4 shall interoperate.

5 "(f) REGULATIONS.—Within one year after the date
6 of enactment of the Twenty-first Century Communications
7 and Video Accessibility Act of 2008, the Commission shall
8 prescribe such regulations as are necessary to implement
9 this section. In prescribing the regulations, the Commis-
10 sion shall—

11 "(1) include standards to ensure the accessi-
12 bility, usability, and compatibility of Internet-en-
13 abled communication services and equipment by in-
14 dividuals with disabilities;

15 "(2) include standards to ensure the real-time
16 text support required by subsection (c);

17 "(3) provide that Internet-enabled communica-
18 tion services, the equipment used for such services,
19 and Internet-enabled communication networks may
20 not impair or impede the accessibility of information
21 content when accessibility has been incorporated into
22 that content for transmission through Internet-en-
23 abled communication services, networks, or equip-
24 ment;

1 "(4) require each manufacturer of equipment
2 used for Internet-enabled communication services
3 and each provider of Internet-enabled communica-
4 tion service—
5 "(A) to file with the Commission a written
6 accessibility and compatibility impact analysis
7 for each product or service released to the pub-
8 lic that describes steps to achieve access, includ-
9 ing information about the company's efforts to
10 consult with individuals with disabilities, de-
11 scriptions of a product or service's accessibility
12 features, and information about the product or
13 service's compatibility with peripheral devices or
14 specialized customer premises equipment com-
15 monly used by persons with disabilities to
16 achieve access; and
17 "(B) to file a report with the Commission
18 that describes the steps that have been taken by
19 such manufacturer or provider to implement
20 this Act on an annual basis;
21 "(5) include enforcement and complaint proce-
22 dures that shall—
23 "(A) require the Commission to resolve
24 complaints alleging a violation of this section
25 within 90 days;

1 "(B) provide for a separate and identifi-
2 able electronic, telephonic, and physical recep-
3 tacle for the receipt of (both formal and infor-
4 mal) complaints filed under this section; and
5 "(C) facilitate the filing of formal com-
6 plaints.
7 "(g) REMEDIES.—The limitations on actions in sec-
8 tion 255(f) shall not apply to this section.
9 "(h) REPORTING.—Every two years after the date of
10 enactment of the Twenty-first Century Communications
11 and Video Accessibility Act of 2008, the Commission shall
12 submit a report to the Committee on Commerce, Science,
13 and Transportation of the Senate and the Committee on
14 Energy and Commerce of the House of Representatives
15 that assesses the level of compliance with this section and
16 evaluates the extent to which any accessibility barriers still
17 exist with respect to new technologies. Such report shall
18 include information about the number and resolution of
19 complaints brought under this section.
20 "(I) CLEARINGHOUSE.—The Commission shall, in co-
21 ordination with the Access Board and the National Tele-
22 communications and Information Administration, estab-
23 lish a clearinghouse of information on the availability of
24 accessible products and services and accessibility solutions
25 required under this section. Such information shall be

1 made publicly available on the Commission's website and
2 by other means, and shall include an annually updated list
3 of products and services with access features.

4 "(j) OUTREACH AND EDUCATION.—Within one year
5 after the date of enactment of the Twenty-first Century
6 Communications and Video Accessibility Act of 2008, the
7 Commission, in coordination with the National Tele-
8 communications and Information Administration, shall
9 conduct an informational and educational program de-
10 signed to inform the public about the availability of the
11 clearinghouse, and the protections and remedies available
12 under this section.

13 "(k) DEFINITION.—For purposes of this section the
14 term 'undue burden' means significant difficulty or ex-
15 pense. In determining whether the requirements of any
16 provision of this section would result in an undue burden,
17 the factors to be considered include—

18 "(1) the nature and cost of the steps required
19 for the manufacturer or provider;

20 "(2) the impact on the operation of the manu-
21 facturer or provider;

22 "(3) the financial resources of the manufacturer
23 or provider; and

24 "(4) the type of operations of the manufacturer
25 or provider.".

1 **SEC. 105. UNIVERSAL SERVICE.**

2 (a) CONSUMERS WITH DISABILITIES.—Section 254
3 of the Communications Act of 1934 (47 U.S.C. 254) is
4 amended—

5 (1) in subsection (b)—

6 (A) by redesignating paragraph (7) as
7 paragraph (8); and

8 (B) by inserting after paragraph (6) the
9 following new paragraph:

10 "(7) ACCESS BY CONSUMERS WITH DISABIL-
11 ITIES.—Consumers with disabilities should have ac-
12 cess to telecommunications and Internet-enabled
13 communication services, including interexchange
14 services and advanced telecommunications and infor-
15 mation services."; and

16 (2) in subsection (c), by adding at the end the
17 following new paragraph:

18 "(4) INDIVIDUALS WITH DISABILITIES.—Not-
19 withstanding subsection (j), the Commission may, in
20 order to implement the principle established in sub-
21 section (b)(7), designate telecommunications services
22 that are needed by individuals with disabilities to en-
23 gage in communication with one or more other indi-
24 viduals in a manner that is functionally equivalent
25 to the ability of individuals without disabilities to en-
26 gage in such communication as services supported

1 by Lifeline and Link Up assistance programs and
2 other Federal universal service support mecha-
3 nisms.".
4 (b) ALLOCATION OF USF FOR SERVICES FOR INDI-
5 VIDUALS WITH DISABILITIES.—Section 254 of the Com-
6 munications Act of 1934 (47 U.S.C. 254) is further
7 amended—
8 (1) by redesignating subsections (i) through (l)
9 as subsections (j) through (m), respectively; and
10 (2) by inserting after subsection (h) the fol-
11 lowing new subsection:
12 "(i) INDIVIDUALS WHO ARE DEAF-BLIND.—
13 "(1) IN GENERAL.—Within 6 months after the
14 date of the enactment of the Twenty-first Century
15 Communications and Video Accessibility Act of
16 2008, the Commission shall establish rules that de-
17 fine as eligible for universal service support, pro-
18 grams that are certified by a State commission or
19 approved by the Commission for the distribution of
20 specialized customer premises equipment designed to
21 make telecommunications and Internet-enabled com-
22 munication service, including interexchange services
23 and advanced telecommunications and information
24 services, accessible by individuals who are deaf-blind.

"(2) DEFINITION.—For the purposes of this subsection, the term 'individuals who are deaf-blind' has the same meaning as such term has in the Helen Keller National Center Act, as amended by the Rehabilitation Act Amendments of 1992 (29 U.S.C. 1905(2)).

"(3) ANNUAL AMOUNT.—The total amount of universal service support that may be obligated or expended under this subsection for any fiscal year may not exceed $10,000,000.".

TITLE II—VIDEO PROGRAMMING

SEC. 201. COMMISSION INQUIRY ON CLOSED CAPTIONING DECODER AND VIDEO DESCRIPTION CAPABILITY, USER INTERFACES, AND VIDEO PROGRAMMING GUIDES AND MENUS.

(a) INQUIRY REQUIRED.—Within 180 days after the date of enactment of this Act, the Federal Communications Commission shall complete an inquiry on the following subjects:

(1) CLOSED-CAPTIONING DECODER AND VIDEO DESCRIPTION CAPABILITY.—With respect to closed captioning decoder and video description capability, the Commission shall—

(A) identify—

1 (i) the formats and software com-
2 monly used by video programming pro-
3 viders or owners for exhibition on new
4 technologies, including those used by Inter-
5 net-enabled and digital wireless services;
6 and
7 (ii) the related technical issues associ-
8 ated with the implementation of closed
9 captioning and video description by means
10 of such new technologies;
11 (B) identify the technical standards, proto-
12 cols, and procedures needed for the trans-
13 mission of closed captioning and video descrip-
14 tion by means of Internet-enabled services and
15 digital wireless devices; and
16 (C) identify technical standards, protocols,
17 and procedures to enable video programming
18 providers and owners to transmit emergency
19 alerts in a manner that is accessible to individ-
20 uals who are blind or visually impaired.
21 (2) USER INTERFACES.—With respect to user
22 interfaces, the Commission shall—
23 (A) identify the technical standards, proto-
24 cols, and procedures needed to enable apparatus
25 designed to receive or display video program-

1 ming transmitted simultaneously with sound
2 (including apparatus designed to receive or dis-
3 play video programming transmitted by means
4 of Internet-enabled services) to be capable of
5 making its apparatus functions, including the
6 receipt, display, navigation or selection of video
7 programming, accessible to and usable by indi-
8 viduals with disabilities; and
9 (B) identify the technical standards, proto-
10 cols, and procedures needed to enable on-screen
11 text menus and other visual indicators used to
12 access video programming functions—
13 (i) to display such menus or indica-
14 tors; and
15 (ii) to provide accompanying audio
16 output, to enable control of such functions
17 by individuals who are blind or have low vi-
18 sion.
19 (3) VIDEO PROGRAMMING GUIDES AND
20 MENUS.—With respect to video programming guides
21 and menus, the Commission shall identify the tech-
22 nical standards, protocols, and procedures needed to
23 enable video programming information and selection
24 provided by means of a navigational device, guide, or
25 menu to be accessible in real-time by individuals

1 with disabilities who are unable to read the visual
2 display.
3 (b) REPORT ON STUDY.—Within one year after the
4 date of enactment of this Act, the Commission shall sub-
5 mit to the Congress a report on the results of such inquiry.
6 **SEC. 202. CLOSED CAPTIONING DECODER AND VIDEO DE-**
7 **SCRIPTION CAPABILITY.**
8 (a) AUTHORITY TO REGULATE.—Section 303(u) of
9 the Communications Act of 1934 (47 U.S.C. 303(u)) is
10 amended to read as follows:
11 "(u) Require that every apparatus designed to receive
12 or display video programming transmitted simultaneously
13 with sound, including apparatus designed to receive or dis-
14 play video programming transmitted by means of Internet-
15 enabled services, that are shipped in interstate commerce
16 or manufactured in the United States—
17 "(1) be equipped with built-in closed caption
18 decoding capability designed to display closed-cap-
19 tioned video programming;
20 "(2) have sufficient capacity to make available
21 the transmission and delivery of video description
22 services as required by section 713(f); and
23 "(3) have the capability to display emergency
24 information, including Emergency Alert System mes-

1 sages, in a manner that is accessible to individuals
2 who are blind or visually-impaired.".
3 (b) SHIPMENT IN COMMERCE.—Section 330(b) of the
4 Communications Act of 1934 (47 U.S.C. 330) is amend-
5 ed—
6 (1) by striking the second sentence and insert-
7 ing the following: "Such rules shall provide perform-
8 ance and display standards for such built-in decoder
9 circuitry, the transmission and delivery of video de-
10 scription over technologies that are based in digital
11 signals, Internet-enabled services, wireless devices,
12 or other methods, and the transmission of closed
13 captioning over technologies that are based in Inter-
14 net-enabled services, wireless devices, or other tech-
15 nologies.";
16 (2) in the fourth sentence, by inserting "and
17 video description service" after "closed-captioning
18 service"; and
19 (3) by striking the last sentence.
20 (c) IMPLEMENTING REGULATIONS.—The Federal
21 Communications Commission shall prescribe such regula-
22 tions as are necessary to implement the amendments made
23 by subsections (a) and (b) within 18 months after the date
24 of enactment of this Act.

1 **SEC. 203. VIDEO DESCRIPTION AND CLOSED CAPTIONING.**

2 Section 713 of the Communications Act of 1934 (47
3 U.S.C. 613) is amended by striking subsections (f) and
4 (g) and inserting the following:

5 "(f) VIDEO DESCRIPTION.—

6 "(1) REINSTATEMENT OF RULES.—The video
7 description regulations of the Commission contained
8 in the report and order identified as Implementation
9 of Video Description of Video Programming, Report
10 and Order (15 F.C.C.R. 15.230 (2000)), shall, not-
11 withstanding the decision of the United States Court
12 of Appeals for the District of Columbia Circuit in
13 *Motion Picture Association of America, Inc., et. al.,*
14 *v. Federal Communications Commission , et. al.* (309
15 F. 3d 796, November 8, 2002), be considered to be
16 in full force and effect and ratified by law.

17 "(2) CONTINUING AUTHORITY OF THE COMMIS-
18 SION.—The Commission—

19 "(A) shall, within 45 days after the date of
20 enactment of the Twenty-first Century Commu-
21 nications and Video Accessibility Act of 2008,
22 republish its video description regulations con-
23 tained in the report and order identified as Im-
24 plementation of Video Description of Video Pro-
25 gramming, Report and Order (15 F.C.C.R.
26 15,230 (2000));

1 "(B) shall initiate a proceeding, to be com-
2 pleted within 18 months after such date of en-
3 actment, to—
4 "(I) identify methods to render on-
5 screen-displayed text in a manner acces-
6 sible to individuals who are blind or vis-
7 ually-impaired; and
8 "(ii) promulgate regulations that re-
9 quire the rendering of on-screen-displayed
10 text in a manner accessible to individuals
11 who are blind or visually-impaired; and
12 "(C) shall promulgate any other regulation
13 that the Commission may find necessary to im-
14 plement, enforce, or otherwise carry out the
15 provisions of this subsection, including regula-
16 tions to increase the amount of video descrip-
17 tion required to ensure full access to television
18 programming for individuals who are blind or
19 visually-impaired.
20 "(3) REQUIREMENTS FOR RULES.—Such regu-
21 lations shall include an appropriate schedule of
22 deadlines for the provision of video description of
23 video programming and may include the following
24 exemptions:

1 "(A) A provider of video programming or
2 program owner may petition the Commission
3 for an exemption from the requirements of this
4 section, and may become exempt from those re-
5 quirements after the Commission grants such
6 petition, upon a showing that the requirements
7 contained in this section would result in an
8 undue burden (as defined in subsection (e)).
9 "(B) The Commission may exempt from
10 the regulations established pursuant to para-
11 graph (2)(C) services, classes of services, pro-
12 grams, classes of programs, equipment, or
13 classes of equipment for which the Commission
14 has determined that the application of such reg-
15 ulations would be economically burdensome to
16 the providers of such services.
17 "(4) ON-SCREEN-DISPLAYED TEXT DEFINED.—
18 In this subsection, the term 'on-screen-displayed
19 text' includes written or other non-verbal informa-
20 tion, whether scrolled or displayed as characters or
21 images, on television screens—
22 "(A) during regular programming when
23 such information is provided to afford viewers
24 with warnings of and instructions on how to re-
25 spond to emergency or hazardous conditions;

1 "(B) during local and national news bul-
2 letins; and
3 "(C) during the broadcasting of any other
4 information the Commission deems appropriate.
5 "(g) DEFINITIONS.—For purposes of this section:
6 "(1) VIDEO DESCRIPTION.—The term 'video de-
7 scription' means the insertion of audio narrated de-
8 scriptions of a television program's key visual ele-
9 ments into natural pauses between the program's
10 dialogue.
11 "(2) VIDEO PROGRAMMING.—The term 'video
12 programming' means programming provided by, or
13 generally considered comparable to programming
14 provided by, a television broadcast station, even if
15 such programming is distributed over the Internet or
16 by some other means.".
17 **SEC. 204. USER INTERFACES REGULATIONS.**
18 Section 303 of the Communications Act of 1934 (47
19 U.S.C. 303) is further amended by adding at the end the
20 following new subsection:
21 "(z)(1) Require—
22 "(A) that every apparatus designed to receive
23 or display video programming transmitted simulta-
24 neously with sound, including apparatus designed to
25 receive or display video programming transmitted by

1 means of Internet-enabled services, be designed, de-
2 veloped, and fabricated so that control of all appa-
3 ratus functions, including the receipt, display, navi-
4 gation or selection of video programming, is acces-
5 sible to and usable by individuals with disabilities;
6 "(B) that where on-screen text menus or other
7 visual indicators are used to access video program-
8 ming functions, that such apparatus be used—
9 "(I) to display such menus or indicators;
10 and
11 "(ii) to provide accompanying audio output
12 to enable control of such functions by individ-
13 uals who are blind or have low vision; and
14 "(C) a conspicuous means of accessing closed
15 captioning and video description, including—
16 "(I) the inclusion of a button on the re-
17 mote control of such apparatus designated for
18 activating the closed caption function; and
19 "(ii) the inclusion of 'closed captions' and
20 'video description' on the top tier of the on
21 screen menu of such apparatus.
22 "(2) For purposes of this subsection, the term 'video
23 programming' has the meaning provided by section 602.".

1 **SEC. 205. ACCESS TO VIDEO PROGRAMMING GUIDES AND**
2 **MENUS.**

3 (a) AMENDMENT.—Section 303 of the Communica-
4 tions Act of 1934 (47 U.S.C. 303) is further amended by
5 adding at the end the following new subsection:

6 "(aa) Require each video programming provider or
7 owner or multichannel programming distributor to ensure
8 that video programming information and selection pro-
9 vided by means of a navigational device, guide, or menu
10 is accessible in real-time by individuals with disabilities
11 who are unable to read the visual display.".

12 (b) IMPLEMENTING REGULATIONS.—The Federal
13 Communications Commission shall prescribe such regula-
14 tions as are necessary to implement the amendment made
15 by subsection (a) within 18 months after the date of enact-
16 ment of this Act.