

REMARKS OF FCC CHAIRMAN TOM WHEELER  
AS PREPARED FOR DELIVERY  
COLEMAN INSTITUTE CONFERENCE ON  
COGNITIVE DISABILITIES AND TECHNOLOGY  
BROOMFIELD, CO  
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Thank you to the Coleman Institute for the invitation and for that warm welcome.

More importantly, thank you for your tireless work to promote advances in science, engineering, and technology that will improve the lives of people with cognitive disabilities.

Obviously, we are gathering at an exciting time. Only 33 days left until the election. Now, the last thing I want to do is wade into presidential politics, but, two weeks ago, I saw a *Washington Post* story on the race that speaks to today's conference.

The headline read as follows: "Clinton Makes an Unusual Push: To Win Over Disabled People and their Families."

Forget about the substance of the story, and think about that headline.

It's 2016, two-plus decades after the ADA; nearly 1 in 5 Americans has a disability of some sort – 30 million have cognitive disabilities; and the idea of a candidate doing targeted outreach to this huge part of the population is seen as – quote – unusual.

This headline reminds us that, for all our progress—and we've made a lot of progress - we're not where we need to be when it comes to making sure accessibility issues are a first thought, not an afterthought.

That's why events like this are so important, and that's why I'm so happy to be here.

I look forward to engaging with you and learning from you today. But, first, I'd like to use my remarks to bring you up to speed on what we're doing at the FCC to address the challenges of Americans with cognitive disabilities.

For starters, let me be clear about something. Yes, the challenges before us are real. We need to be open-eyed and acknowledge that we have a lot of work to do. But, make no mistake, I've never been more optimistic about the possibilities.

We are at a time when digital technology – Internet Protocol, or "IP" technology – offers the greatest opportunity in history to use technology to attack challenges that have affected individuals since the beginning of time – including the 30 million Americans with cognitive disabilities.

Let me stop there, for this must be the driving point for all of us.

We are at an historical juncture. If we don't do everything possible to harness this marvelous new technology revolution to attack the challenges of individuals with disabilities, then shame on us.

I am constantly coming across stories about the new ways communications technology is helping Americans with disabilities live independently, get an education, communicate freely with friends and relatives, and find and enjoy work that not only brings them a source of income, but brings a sense of personal fulfillment and full, meaningful participation in society.

Just last month, I met with Microsoft's senior leadership team at their Seattle campus. We talked about topics you might imagine we'd discuss, but then, to my amazement and delight, they wanted to talk about using technology to empower individuals with disabilities.

I learned about new tools they had developed to help people improve their reading and writing, including specific technology for disabilities such as dyslexia. They shared the story of a 10-year-old student who was dyslexic and dysgraphic, who would always tell his teacher that he was stupid. At the beginning of the school year, he was stuck reading 4-words-a-minute, but after giving him an immersive reader, he jumped to 22-words-per-minute. In that same class, you had a special needs student jump from 43 to 90-words-per-minute after learning tools were integrated; another went from 15 to 62; another went from 35 to 84.

Microsoft is hardly alone.

If you go to [TheArc.org](http://TheArc.org), you'll find a tech toolkit with over 600 apps to help with everything from organizational skills, to social skills, to exercise and meds reminders.

Let's stop again here for a minute.

Think back only a few years ago, before the smartphone. Then, supercomputers used to be locked away in special rooms. Today, everyone can have a computer equivalent in power in their pocket or purse. And because of the ubiquitous wireless network, that computer can tap into resources from virtually anywhere.

This is what I mean when I talk about our historical moment.

And there are many more exciting breakthroughs around the corner. After years of hype, there's broad consensus that we're reaching a tipping point where virtual reality moves from hobbyist's laboratories into our lives – and for a lot more than playing video games. We're already seeing VR used successfully to teach autistic children how to cross a road or autistic teens how to drive. We've also seen the use of VR to help stroke victims recover cognitive skills.

A few weeks ago I was at the VR Lab at Stanford University. Donning the goggles I became an African-American woman in a VR program designed to deal with interpersonal behavior issues. I experienced and had to deal with how people reacted to something I was not – but thanks to VR I was.

Imagine what a similar program could do with disability-related issues. With ever-increasing computing power and high-speed wireless connectivity, we've barely scratched the surface of VR's potential.

There are so many potential opportunities opening now because of technology. The question becomes what do we need to do to seize them?

One of the most important things that needs to happen is that accessibility needs to be baked into the development of mainstream consumer electronics and services. I said it before, but it bears repeating, access to the wonders of technology must be a forethought, not an afterthought.

For years, the only way to obtain access was to turn to assistive technologies – often expensive, hard to find, and frequently not as effective as the real thing. And because these were substitutes for what everyone else was using, they could be stigmatizing. A child having to use a device that was different than the one his friend had wondered why he couldn't also have the latest and greatest innovations.

All this is changing – and doing so at a pace that is unimaginable.

Burgeoning software technologies and innovative apps are developing at lightning speeds – coming from both college student dorm rooms and Fortune 500 enterprises. And these are making it easier than ever before to incorporate accessibility features into off-the-shelf products.

Among other things, the ability to customize devices now empowers consumers with disabilities to set their own devices to meet their very specific and individual functional needs.

But, in what is a recurring theme in these remarks, we need to do more.

That's why, two years ago, I established a Disability Advisory Committee at the FCC for the purpose of bringing together industry and consumer stakeholders on issues such as these. The Committee has nearly 40 members representing the consumer electronics industry, telecommunications and IT companies, consumers, researchers, and educational institutions.

Last October, we hosted the first-ever Summit and Expo on the Telecommunications Needs of People with Cognitive Disabilities. Thought leaders from around the country shared their expertise on ways to ensure that communications products and services are accessible for people with cognitive disabilities.

Following the summit, we at the Commission got to work to begin executing several recommended actions, including the development of a set of Best Practices by our Disability Advisory Committee. Together, we were successful in getting stakeholders (some of whom are here today) to come to a consensus on what these Best Practices should be. On September 22, the plan was unanimously approved by the advisory committee.

Thank you to those of you who made this happen, and for all of your hard work.

The commitment that these companies and their trade associations have made to these Best Practices is not to be taken lightly. Their promise to address the needs of people with cognitive disabilities as they design and roll out new communications technologies is both groundbreaking and inspiring. It is the first time that this industry sector has made public its recognition of the needs of this population.

And did I mention that there is an explicit mention in the Best Practices document that its principles are consistent with the Coleman Institute's Declaration of Principles: *Rights of People with Cognitive Disabilities to Technology and Information Access*?

I understand that at present, there are 604 organizations and 1,012 individuals who are signatories to this document. Well, now there is one more, because I – proudly – just signed the Declaration.

So how do the Best Practices work to reinforce the Declaration?

First, they encourage companies to develop collaborative relationships with people with cognitive disabilities and their organizations and to keep abreast of the needs of this population by keeping up with research and emerging standards, in part through participation in cognitive disabilities conferences and online communities.

It's a simple step, but action begins with understanding and relationships.

More importantly, the Best Practices provide that companies include people with cognitive disabilities in their product and service design and in development processes.

Again, it is a simple but powerful step to include individuals with cognitive disabilities as early as possible in market research, product testing, and product trials.

To further the principles of universal design and to minimize the need for assistive devices, the Best Practices also encourage efforts to incorporate capabilities that allow for customization of features and functions to make it easier to access and use off-the-shelf products.

Finally, the Best Practices recommend that companies offer accessible instructions, user guides, customer support services, and other information in ways that can enable people with cognitive disabilities, either independently or with their caregivers or support staff, to learn to operate and use communications products and services.

The Best Practices document is a significant step forward – but it's not the only one.

This week, the Commission released a Public Notice recommending practices for making emergency information shown on television more understandable to people with cognitive disabilities. It is our responsibility to ensure that people with cognitive disabilities are able to heed emergency warnings and take the proper precautions. This guidance tells television providers that emergency warnings should be presented in a way that provides content in plain and understandable English; avoids complicated and lengthy sentences; provides content through

multiple means, such as maps and other pictorial representation; and avoids, where possible, scrolls unrelated to the emergency during the broadcast of emergency information.

As they say on those late-night infomercials, but wait, there's more.

The Commission's Disability Rights Office has also taken an in-depth look at communications technologies for people with cognitive disabilities, noting accessibility barriers and delineating steps we can take to ensure that our policies eliminate them.

Today, I am proud to announce the release of the Commission's very first White Paper on cognitive disabilities which discusses these issues and presents solutions for accessible information and communication technologies.

The paper identifies three primary barriers.

Two of these you are already familiar with: First, the lack of accessibility; and second, economic barriers, resulting from the lower incomes that are prevalent in this population.

But – and I'm sure this is no surprise to you – we found something else that appears to be preventing the full utilization of emerging communications technologies. That is the lack of outreach to people with cognitive disabilities and their support networks about both their rights to accessible technologies and the availability of some communications technologies that can already improve their daily lives in significant ways.

The white paper contains an impressive rundown of available communications tools that can help people live more independently. I urge you to read about them. But, on the whole, they are being underutilized because people either don't know they are available or know how to access them.

We are told by the Coleman Institute and others that there are still many devices whose complexities pose considerable challenges for people with cognitive disabilities. And the truth is, we are in some danger of this situation getting worse.

A few weeks ago, our Disability Advisory Committee debated how best to ensure that future technological changes do not leave people with disabilities behind. The truth is we are about to embark on a technological revolution that may dwarf the changes we have seen to date.

Indeed, our current reliance on technology is likely to become even greater. With machine learning artificial intelligence, virtual and augmented reality, the Internet of Things, unlimited bandwidth and vast improvements in audio and visual quality, as well as automated speech recognition technologies, the world in which we work, learn, play and socialize has the potential to vastly improve.

But it must improve for all, and that means these innovations must involve accessibility from the start.

Ignoring this risks creating even greater obstacles to access for people with limited processing, attention, and learning capabilities.

The Commission has rules in place assuring that advanced communications services and equipment are accessible, and we will enforce those rules.

We need to make sure that new barriers are not created through complex display menus and user guides, complicated security and navigation features, and software upgrades that may be well-intentioned, but which often create obstacles for individuals with disabilities.

After mastering a particular feature, all of us, not just individuals with disabilities, shy away from having to learn a whole new way of using it; but for some of us, that challenge is even greater.

We also need to do a better job of ensuring that the cognitive disabilities community becomes aware of the already accessible products and services that are available. Some people may be hesitant to acquire devices because they don't know that they can use them, are afraid to try them out, or don't realize the value they can hold. If we disseminate accurate information about the options available and the benefits these technologies hold, people may be more willing to try them out.

To help industry stakeholders follow through with their commitment to the Best Practices, we policy makers can try to bridge the gap between industry and consumer stakeholders by keeping the dialogue open on these issues.

We can also encourage industry management to do their part to raise awareness among their designers, developers, service personnel and customer representatives about the needs of people with cognitive disabilities and their support networks, and to help educate their own employees about features of their products and services that may be useful to people with I/DD.

One last point, and then I'll close.

I've been talking this morning about harnessing the power of technology to improve the lives of people with cognitive disabilities. We can't just rely on technology to lift up this population. We need jobs.

I am proud that the FCC has built a prototypical program for the employment of people with intellectual disabilities in federal agencies. Working with The Arc and others, the FCC now has six new employees – and others as interns – who have been a great match for our needs.

Let me step out of the policymaker role for a minute and talk as a manager and coworker.

The involvement of individuals with I/DD has helped everyone at the FCC. Work is getting done – and well. Training is ongoing. Promotions are occurring. And new relationships and sensitivities have developed.

And I would be remiss if I didn't brag a bit about the work of Mindy Ginsberg, the FCC's Deputy Managing Director, who has not only brought the program to life at the FCC, but has also been working with other federal agencies to encourage them to do the same.

So here's the bottom line. This is our time to make a difference.

Never have the stars aligned as they have now to address the challenges of individuals with cognitive disabilities. Groups like the Coleman Institute, The Arc, and others have raised the level of awareness and created meaningful programs.

The march of technology has created opportunities that weren't even imaginable a short time ago, and the technology industry has seized the moment. And I'm here to say that at the Federal Communications Commission we are dedicated to the core American principles of equality and opportunity *for all*.

Thank you.