TECHNOLOGY AND DISABILITY POLICY HIGHLIGHTS - AUGUST 2019

Click the headings below to link directly to a particular section.

Legislative Activities   Regulatory Activities   Wireless RERC Updates   Other Items of Interest

In August, Colorado passed *Modifications to the Uniform Election Code* (**HB19-1278**) and *Voting Access for People with Disabilities* (**SB19-202**) Acts to expand access to voting for all eligible Coloradans. SB19-202 gives Coloradans with disabilities the ability to vote independently and privately using nonvisual or low vision access technologies. At the end of the Congressional summer session, House Representative Janice Schakowsky (D-IL), Lisa Blunt Rochester (D-DE), and Mark DeSaulnier (D-CA) introduced *Greater Access and Independence through Nonvisual Access Technology (GAIN) Act of 2019* [**H.R. 3929**]. The National Federation of the Blind lauded Congress' efforts to ensure that users with vision disabilities have full access to all features of a device.

In the regulatory space, the Federal Communications Commission (FCC) released a Public Notice [**CG Docket No. 05-231**] inviting public comment on a petition for declaratory ruling and rulemaking filed by a coalition of consumer and academic organizations concerning live captioning quality metrics and the use of automated speech recognition techniques. The FCC also released a Report and Order [**WT Docket No. 17-228**] requiring wireless service providers to post publicly accessible information on their websites listing the hearing aid compatible (HAC) mobile phones that they offer. The Commission took these steps to ensure easily discoverable online materials about the HAC compliant mobile devices offered by service providers.

In Wireless RERC news, we are excited to announce that we teamed up with the Georgia Radio Reading Service (GaRRS) to produce an **all-audio set-up guide for users of the Amazon Echo Dot**. The new guide is meant to be a tutorial for users who are blind or have low vision who want to set up their devices without assistance. The audio guide details the process in a step-by-step format: First, what to expect when unboxing the Echo Dot, next, what the functions of the buttons on the top of the Dot do, and finally, how to synch the Dot to the Alexa app.

This issue also includes news about the California Unruh Civil Rights Act, teaching universal design, Facebook, Project Euphonia, an AI-powered chatbot, IoT, testing accommodations, and more.

Editorial correction: Last month's issue highlighted a **book chapter** co-authored by Dr. DeeDee Bennett, who is an associate professor at the University at Albany, not an assistant professor.

LEGISLATIVE ACTIVITIES

INCREASING VOTING ACCESS IN COLORADO

August 23, 2019 – This month, Colorado introduced and passed two major pieces of legislation that go into effect immediately. These new laws, *Modifications to the Uniform Election Code* (**HB19-1278**) and *Voting Access for People with Disabilities* (**SB19-202**), expand access to voting for all eligible Coloradans. HB19-128 contains a provision for people with disabilities in which people may seek a court order to keep polling locations open past the regular closing time on election day when voting at or access to a polling location has been substantially impaired. This legislation increases physical access to Voter Service and Polling Centers (VSPCs) and is timely as constituents prepare for the 2020 election. The Senate bill, SB19-202, gives Coloradans with disabilities the ability to vote independently and privately mark a ballot or use an electronic voting device that produces a paper record using nonvisual or low vision access technologies.

Voting Access for People with Disabilities also requires the Secretary of State to include in the procedures a method by which a voter with a disability may request such a ballot. *Voting Access for People with Disabilities* also asserts that a voter with a disability who requests that a ballot and balloting materials be sent by electronic transmission may choose electronic mail delivery or if offered by the voter's jurisdiction, other electronic means. The designated election official in each jurisdiction charged with distributing a ballot and balloting materials is required to transmit the materials to the voter using the means of transmission chosen by the voter. A voter with a disability who receives a ballot via electronic means must print the ballot, and such ballot must be received by the election official in the applicable jurisdiction before the close of polls on the day of the election. To implement the Senate bill, the state allocated $50,000 from the Department of State cash fund for use by the information technology division. [Source: Cynthia Wilson, North Forty News]

ADDITIONAL INFORMATION:
Two New Voting Laws Go Into Effect
https://northfortynews.com/two-new-voting-laws-go-into-effect/
Colorado Revup Toolkit
https://www.aapd.com/wp-content/uploads/2016/08/REVUP-Toolkit-CO.pdf

CALIFORNIA AFFIRMS PARITY OF ACCESS TO ONLINE GOODS AND SERVICES

August 16, 2019 – The California Supreme Court provided an expansive opinion in *White v. Square, Inc., No. S249248.* The issues presented to the Supreme Court delve into whether a plaintiff has experienced discrimination by being denied access or only has limited access to a business's website which results in the individual(s) not being able to complete an intended transaction. The Opinion

also addresses whether or not the plaintiff should be required to inform the business of their lack of access and negotiate some agreement or alternative means of accessing the goods or services. The California Supreme Court ruled that "a person who visits a business's website with intent to use its services and encounters terms or conditions that exclude the person from full and equal access to its services has standing under the Unruh Civil Rights Act, with no further requirement that the person enter into an agreement or transaction with the business." Also, claims under the California Unruh Rights Act, guarantees all customers and clients parity of access to goods and services offered online and otherwise. This case also settled "futile gesture doctrine," which says that people alleging discrimination based on a clearly stated policy or a prominent access barrier are not obligated to persist in asking businesses for their rights. [Source: Disability Rights Education & Defense Fund]

ADDITIONAL INFORMATION:

California Supreme Court Issues Unanimous Decision Affirming Full, Equal Access in the Internet Age
https://dredf.org/2019/08/16/california-supreme-court-issues-unanimous-decision-affirming-full-equal-access-in-the-internet-age/

GREATER ACCESS AND INDEPENDENCE THROUGH NONVISUAL ACCESS TECHNOLOGY ACT

August 7, 2019 – At the end of the Congressional summer session, House Representative Janice Schakowsky (D-IL), Lisa Blunt Rochester (D-DE), and Mark DeSaulnier (D-CA) introduced *Greater Access and Independence through Nonvisual Access Technology (GAIN) Act of 2019* [**H.R. 3929**]. This legislation uses directive language to compel the Architectural and Transportation Barriers Compliance Board ("Access Board") to develop a minimum non-visual access standard for home-use medical devices, exercise equipment, and home appliances, and provide for the enforcement of the standard. According to the GAIN Act, a minimum nonvisual access standard shall apply to a covered device that is manufactured after the date that is 24 months after the date on which such standard is promulgated. The National Federation of the Blind lauded Congress' efforts to ensure that users with vision disabilities have full access to all features of a device. The President of the National Federation of the Blind, Mark Riccobono, asserts that it is necessary for the "privacy, wellbeing, and independence of blind Americans." [Source: Global Accessibility News]

ADDITIONAL INFORMATION:

National Federation of the Blind Applauds Introduction of Greater Access and Independence through Nonvisual Access Technology (GAIN) Act | Best Brothers Group of Companies

https://bbg.life/index.php/2019/08/07/national-federation-of-the-blind-applauds-introduction-of-greater-access-and-independence-through-nonvisual-access-technology-gain-act-best-brothers-group-of-companies/

REGULATORY ACTIVITIES

PETITION FOR CLOSED CAPTIONING QUALITY METRICS

August 14, 2019 – The FCC released a Public Notice [**CG Docket NO. 05-231**] seeking comments on a petition for declaratory ruling and petition for rulemaking filed by a coalition of consumer groups and Rehabilitation Engineering Research Centers (RERC). Among the petitioners were Telecommunications for the Deaf and Hard of Hearing, Inc., RERC on Universal Interface & Information Technology Access (IT-RERC), National Association of the Deaf (NAD), Deaf/Hard of Hearing Technology RERC (DHH-RERC), Hearing Loss Association of America (HLAA), and the Association of Late-Deafened Adults (ALDA), to name a few. The Consumer Groups and academicians are requesting that the Commission:

(1) Initiate a notice of inquiry into the current state of "closed captioning techniques for live television programming and how the varying dimensions of caption quality, including accuracy, synchronicity, completeness, and placement affect the accessibility of video programming;"

(2) Following this inquiry, release a rulemaking "to develop rules requiring live television programming to be captioned at a level that meets or exceeds technology-neutral metrics guaranteeing that the programming is accessible by Americans who are deaf or hard of hearing;" and

(3) Issue a declaratory ruling or expedited rule change "on the use of automatic speech recognition (ASR) technologies for captioning of live television programs."

Interested parties may file comments by accessing the Electronic Comment Filing System at https://www.fcc.gov/ecfs/filings. All filings must reference CGB Docket No. 05-231.

ADDITIONAL INFORMATION:
Request for Comment on TDI et al. Caption Quality Petition
Public Notice: Docx -- Pdf -- Txt

REPORTING REQUIREMENTS GOVERNING HEARING AID-COMPATIBLE HANDSETS

August 1, 2019 – The FCC released a Report and Order [**WT Docket No. 17-228**] that asserted wireless service providers must post publicly accessible information on their websites listing the hearing aid compatible (HAC) mobile phones that they offer. It also required service providers to

retain this information on their websites so long as the service provider is offering the device as an option. The Commission took these steps to ensure easily discoverable online materials about the HAC compliant mobile devices offered and to make sure that consumers have access to this information for handsets that they might be using but are no longer being offered by their service provider. Further, the Commission "reduced regulatory burden by eliminating the requirement that service providers annually file electronic FCC Form 655 and replaced this requirement with an annual streamlined certification requirement to be completed using the Commission's new electronic FCC Form 855. Handset manufacturers, however, will continue to annually file electronic FCC Form 655." These two forms are the primary method by which the FCC tracks industry compliance with HAC requirements. [Source: Federal Register]

ADDITIONAL INFORMATION:

Revisions to Reporting Requirements Governing Hearing Aid-Compatible Handsets
https://www.federalregister.gov/documents/2019/08/01/2019-16386/revisions-to-reporting-requirements-governing-hearing-aid-compatible-handsets

WIRELESS RERC UPDATES

NEW AUDIO GUIDE RELEASED! WIRELESS RERC AND GARRS TEAM UP TO RELEASE A STEP-BY-STEP SET-UP AUDIO GUIDE FOR THE AMAZON ECHO DOT

The Wireless RERC is excited to announce that it has teamed up with the Georgia Radio Reading Service (GaRRS) to produce an all-audio set-up guide for users of the Amazon Echo Dot, which GaRRS provides to their listeners. GaRRS is Georgia's premier provider of information for individuals who have a vision or print disability. Every month, they broadcast and stream hundreds of programs, including local and national newspapers, books, magazines, events, employment opportunities, and shopping ads. GaRRS will distribute our audio guide when sending the Dots to their listeners as well as host the audio guide on their website.

The new guide is meant to be a tutorial for users that are blind or have low vision who want to set up their devices without assistance. The production team has learned, through previous data collected from focus groups, that people with vision disabilities find digital assistants, like the Amazon Echo series of products, to be powerful devices that allow them to control their home environments, listen to news, music, books, or radio broadcasts, like GaRRS, or place orders for things just by using their voice. But they often say that they require additional assistance by someone who is sighted to initially set up the device. Our new audio guide details this set-up process in a step-by-step format:

- First, from what to expect when unboxing the Echo Dot,

- Next, what the functions of the buttons on the top of the Dot do, and finally,
- How to synch the Dot to the Alexa app on your smartphone or tablet so you can begin controlling the Dot by your voice.

The Echo Dot audio guide can be found on the GaRRS website here:
https://garrs.org/listen/echodot/

OTHER ITEMS OF INTEREST

INTEGRATION OF UNIVERSAL DESIGN INTO UNIVERSITY CURRICULA (UDUC)

August 28, 2019 - The UDUC is requesting current and past students in departments or colleges that have a focus on Computer Science, Digital Media, Environmental Design, or other technical or design-related programs to complete a survey on the potential benefits of teaching accessibility and Universal Design in college courses. If you are a student or past-student who has taken a technology or design course, please consider taking the survey. Responses from the survey will not be shared with your school or with any other institution. If you are a professor, please consider sharing the survey with your colleagues and students. The higher education and student invites can be accessed here: https://www.uduc.org/survey-invite/

The UDUC also has an employer version of this survey entitled "Measuring the Value of Accessibility and Universal Design Topics in Course Curricula." This is designed for employers and companies to distribute to their employees and colleagues. The invite can be accessed online at https://www.uduc.org/survey-invite-company/.

ADDITIONAL INFORMATION:

If you have any questions feel free to contact Howard Kramer, PI, UDUC hkramer@colorado.edu or 303-492-8672

Take the Survey
https://www.surveygizmo.com/s3/5141262/Universal-Design-Accessibility-Topics-in-College-Curriculum
Initial Results from Survey Measuring the Value of Accessibility and Universal Design Topics in Course Curricula
https://www.uduc.org/research/

FACEBOOK ANNOUNCES LOCAL EMERGENCY ALERTING TOOL

August 27, 2019 - Facebook users now have access to local alerts for emergencies including flash flood warnings, mandatory evacuations, missing people reports, active shooters, road closures, bomb threats, and more. This tool will allow local governments and first responders to not only

remain connected to their communities but also increase safety by providing actionable information to people in the impacted area. Thus far, approximately 350 local governments have issued local alerts via the Facebook tool. Many have reported on their effectiveness with stories about finding missing persons, directing traffic away from a house explosion, informing residents of bomb threats and advising them to avoid the area, and more.

Facebook product manager, Anthea Watson Strong, wrote: "Since we started testing local alerts, we've invested in making these alerts **smarter,** allowing partners to specify whether they're sending a missing person alert, a public safety alert or a weather alert, for example. And we've made them more **targeted,** by giving our partners the ability to select the affected counties, cities, towns or neighborhoods that should receive notifications. This helps us ensure that local authorities reach only the people they need to reach during these urgent situations."

If you are a local government official, emergency manager, law enforcement, or fire department that manages a Facebook page and are interested in being able to utilize the Facebook's local alerts tool, fill out this form. Facebook will notify you if they're available in your region, and if not, they'll inform you when they have expanded to cover your region. If you are an individual who wants to receive local alerts via Facebook, be sure to follow the Facebook Page(s) of the first responders in your community. [Source: Anthea Watson Strong, Facebook]

ADDITIONAL INFORMATION:
Expanding Facebook Local Alerts Within the US
https://www.facebook.com/gpa/blog/expanding-local-alerts
Local Alerts Requests Form
https://www.facebook.com/help/contact/1961386630628121#_=_
List of Cities Where Facebook Alerts are Available
https://newsroom.fb.com/news/2018/11/connecting-people-to-local-news/

IMPROVING SPEECH RECOGNITION INTERFACES FOR NON-STANDARD SPEECH
August 13, 2019 – The development of speech recognition software has been incorporated into many technologies. Despite being used extensively by the disability community, namely people with vision and mobility disabilities, this technology is inaccessible to people with atypical speech patterns. Project Euphonia seeks to bridge the accessibility gap of speech recognition systems to be more inclusive of non-standard speakers. Automatic Speech Recognition (ASR) programs are traditionally developed from 'typical' speech which excludes those with speech impairments or heavy accents. But even the most recent renditions of ASR programs, that are often state of the art, still can only yield high word error rates (WER) for speakers with only a moderate speech

impairment from ALS. Project Euphonia performs speech-to-text transcription that improves ASR for people who have significantly slurred speech.

To accomplish this feat, Project Euphonia utilized a two-step training program that starts with a "baseline standard" and then fine-tunes the training with a personalized speech dataset. This specific dataset was drawn from 36 hours of audio from 67 speakers with ALS and non-standard speech. When developing the models, the training data went through two different neural architectures. The first is the RNN-Transducer (RNN-T). This encoder is bidirectional, which means it looks at the entire sentence at once to provide context. As a result of its platform sequencing, it requires the entire audio sample for speech recognition. The research engineers employ a second neural network architecture called Listen, Attend, and Spell (LAS). This encoder is attention-based, sequence-to-sequence model that maps sequences of acoustic properties to sequences of languages. The network produces "word pieces," which are linguistic representations between graphemes and words. Project Euphonia also tested accented speech. As a result, the project had improved the RNN-T model. It had achieved 91% of the improvement by fine-tuning these two layers. Project Euphonia seeks to explore additional techniques to help with the low data challenge and create interfaces that are more accessible to people with atypical speech and accents. [Source: Joel Shor & Dotan Emanuel, Research Engineers via Google AI Blog]

ADDITIONAL INFORMATION:
Project Euphonia's Personalized Speech Recognition for Non-Standard Speech
http://ai.googleblog.com/2019/08/project-euphonias-personalized-speech.html

AI-POWERED CHATBOT FOR PEOPLE WITH DISABILITIES

August 9, 2019 – AI specialists from the University of Alberta Machine Intelligence Institute, social scientists, and AI education experts from across Canada are collaborating to build a chatbot for health information. This computer program simulates a human conversation through text or voice to assist families and people living with neurodevelopmental disabilities to access expert grade information and resources. This invention comes as a result of observing that people with neurodevelopmental disabilities and their families spend countless hours conducting Google searches to find reliable resources and accurate information as they await seeing specialists who often have long wait times. The artificial intelligence tool developed by these scientists can now aid with finding curated resources and fact-based information from credible sources on the internet. The aim is to develop a chatbot program that is easily accessible for families, educators, and clinicians and can mimic the discussion that one would have with health education or social services experts. The chatbot program would also utilize comments from users to make personalized recommendations for others in similar situations. [Source: Ross Neitz, TechXplore].

Researchers creating AI-powered chatbot to help families living with neurodevelopmental disabilities
https://techxplore.com/news/2019-08-ai-powered-chatbot-families-neurodevelopmental-disabilities.html

VODAFONE HELPS IMPROVE ACCESSIBILITY WITH IoT

August 6, 2019 – Vodafone, a telecommunications company, partnered with Mencap, a learning disability charity, to connect over forty-five supported living homes using Internet of Things technology. The Connected Living project seeks to enhance the quality of life for people with learning disabilities and provide support workers with tools to give personalized care. The two collaborators developed a trial to test the effectiveness of the initiative in locations across Hampshire, Sussex, Somerset, Cornwall, Leicestershire, Nottinghamshire, and Suffolk. During the trial, residents and workers used IoT-enabled services controlled by the Vodafone MyLife app to make daily tasks easier. The app can also create visual guides and reminders, control smart devices around the home, prompt remote support via a digital panic button, and detect unexpected movement. Helen Lamprell, general counsel and external affairs director at Vodafone UK, said: "By co-creating technology with some of Mencap's residents and carers, we have been able to solve problems that we didn't even know existed and develop products specifically for the needs of a group that is often overlooked by tech companies and developers." [Source: Nicholas Fearn, Forbes]

ADDITIONAL INFORMATION:

Vodafone Teams Up With Mencap On Connected Living Project For Disabled People
https://www.forbes.com/sites/nicholasfearn/2019/08/06/vodafone-teams-up-with-mencap-on-connected-living-project-for-disabled-people/

THE RELATIONSHIP BETWEEN DISABILITY ACCOMMODATIONS AND WEALTHY SCHOOLS' KIDS ACCESS TO COLLEGE

August 9, 2019 – In wealthy high school districts around the country, nearly 1 out of 10 students have a disability designation that allows them to have testing accommodations such as environments with reduced distractions and extended testing times. These statistics are much higher than high-poverty schools in Texas, for instance, where fewer than 3% of students receive such accommodations and classifications. These statistics have led to the discussion of systemic bias and equity during the high-stakes college admission process, specifically standardized testing. The dialogue has drawn attention because recently, wealthy families in North Texas got caught in the "Varsity Blues" college-admissions scandal. These families allegedly spent thousands of dollars

on admission schemes to get their children into elite universities which ostensibly included faking disabilities so that their children could receive accommodations for college-entrance exams such as extra time or testing in a private room.

In North Texas, Highland Park High School had no students living in poverty and reported that 12.8% of its students qualified for the disability designation. While at W.W. Samuel High School in Dallas, where approximately 98.5% of students were from low-income families, only 1.6% of students had a disability designation. "Studies suggest African American children are still over-diagnosed for issues like emotional disturbance but under-diagnosed for autism as educators often unconsciously interpret the same behavior differently based on the race of a child. Rynders said such experiences in a community could influence the perception of disability services. For example, it could mean some black educators or parents are less likely to seek referrals for a child."

The consequence for minority students and those of low income is reduced access to learning supports that could be the difference between excelling and struggling to pass a test. These discrepancies in disability diagnoses based on race and class could be explained, in part, by the uncovered expense (upwards of $4000) for the complete psychological testing required as official documentation of disability, as well as the role of privilege. Unfortunately, disabilities are more likely to be noted and acted upon by families from white, middle, and upper-class backgrounds. As a result, college admission boards are not comparing "apples to apples" because of systemic practices that exclude those who need testing accommodations. [Source: Eva-Marie Ayala, The Dallas Morning News]

ADDITIONAL INFORMATION:

[Does better access to disability accommodations give wealthy schools' kids an edge getting into college?](https://www.dallasnews.com/news/education/2019/08/09/kids-wealthy-schools-likely-get-disability-accommodations-give-edge-college)
https://www.dallasnews.com/news/education/2019/08/09/kids-wealthy-schools-likely-get-disability-accommodations-give-edge-college

UPCOMING EVENTS

2019 Online KT Conference: Innovative KT Strategies that Work!

The Center on Knowledge Translation for Disability & Rehabilitation Research (KTDRR) is hosting the *2019 Online KT Conference: Innovative KT Strategies that Work!* The free, virtual conference takes place across three afternoons during one week: 1:00 pm to 5:00 pm ET each day on October 28, 30, and November 1, 2019. The conference is designed for grantees and other stakeholders of the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR). The panelists will present on impactful topics including:

- Setting the stage for knowledge translations.
- Research synthesis and planning for impact.
- Innovative dissemination strategies and tools.

ADDITIONAL INFORMATION:

[Register for the free 2019 Online KT Conference](https://www.surveygizmo.com/s3/5057953/Registration-KTDRR19)

https://www.surveygizmo.com/s3/5057953/Registration-KTDRR19

Call for Papers - CSUN Assistive Technology Conference

The Journal Track of the 35th CSUN Assistive Technology Conference opened on Thursday, August 22, 2019, and closes on Tuesday, September 10,

2019, at 3:00 PM (PDT). Accepted papers for presentation for the Journal Track will be published in Volume 8 of the *Journal on Technology & Persons with Disabilities.*

CSUN 2020 will convene March 9 through 13, 2020 in Anaheim, California. CSUN is the largest international conference addressing topics regarding people with disabilities and assistive and accessible technologies. Conference topics typically pertain to the domains of education, employment and workplace, entertainment, independent living, law and policy, and transportation.

ADDITIONAL INFORMATION:

Journal Call for Papers

https://www.csun.edu/cod/journal-call-papers

TECHNOLOGY AND DISABILITY POLICY HIGHLIGHTS, AUGUST 2019

SUBSCRIBE TO NEWSLETTER

The Technology and Disability Policy Highlights (TDPH) is a monthly newsletter that reports on national public policy events and tracks emerging issues of interest to individuals with disabilities, researchers, policymakers, industry, and advocacy professionals. The Wireless RERC is a research center that promotes universal access to wireless technologies and explores their innovative applications in addressing the needs, user experiences, and expectations of people with disabilities. For more information on the Wireless RERC, please visit our website at [http://www.wirelessrerc.org]. For further information on items summarized in this report, or if you have items of interest that you would like included in future editions, please contact this edition's editors Salimah LaForce [salimah@cacp.gatech.edu] or Dara Bright [dara.bright@cacp.gatech.edu].

If you wish to update your email address, send an email to salimah@cacp.gatech.edu.

_____

The contents of this newsletter were developed under a grant from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant number 90RE5025-01-00). NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this newsletter do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal Government.