

**Technology and Disability Policy Highlights**  

February 2019

Though February is the shortest month in the year, it was not short on activity. The *Notice of Renewal of the Disability Advisory Committee’s (DAC) Charter* [**DA 19-55**] was published in the Federal Register, starting the third two-year term for the DAC. The Committee will address, among other things, hearing aid compatibility, advanced communications and equipment services, and 9-1-1 access. Related to the accessibility of advanced communications equipment, the Federal Communications Commission (FCC), Consumer and Government Affairs Bureau (CGB) released an *Order* [**CG Docket No. 10-213**] granting a brief waiver to e-reader manufacturers. Mid-month, the National Advisory Council published its final report, [*Modernizing the Nation’s Public Alert and Warning System*](https://www.fema.gov/media-library-data/1550587427456-30d4179ee4fa8b97ecf4ab6bee76ace6/NAC_IPAWS_Subcommittee_Final_Report.pdf). Over the two-year term of the NAC and Subcommittee, the members generated recommendations to enhance the delivery and efficacy of emergency messages.

In Wireless RERC news, we produced our annual content review of the TDPH. This past year’s hot topics included the increased development of wireless technologies and next-generation connected devices, continued expansion in disability-focused research, emergency communications access, and improved access to assistive devices and public spaces. The top five most cited words for 2018 were emergency, services, research, communications, and inclusive. Wireless RERC researchers also published two research reports. [Accessibility, Usability, and Social and Cultural Acceptance of Next-Generation Wireless Devices: Initial Findings from Focus Group Research](https://gtvault-my.sharepoint.com/personal/mz22_gatech_edu/Documents/wiRERC_2016%20-%202021/TDPH/February%202019/wireless-rerc-research-brief-18-01-1.pdf) summarizes findings from focus groups which explored accessibility, social appropriateness, and cultural acceptability issues of wireless technology related use among individuals with disabilities. The [Mobile Phone Accessibility Review](https://gtvault-my.sharepoint.com/personal/mz22_gatech_edu/Documents/wiRERC_2016%20-%202021/TDPH/February%202019/analysis_of_accessibility_features_on_mobile_phones_final.docx) analyzes the state of accessibility of mobile phones by looking at the presence of features that were designed to be assistive or that impact accessibility. Also, please plan to attend our [Leadership Luncheon, Contexts of Connectivity](http://www.wirelessrerc.gatech.edu/wireless-rerc-leadership-luncheon-contexts-connectivity), for a discussion about how smart connected devices can enhance access to public and private environments and support the independent living of people with disabilities across contexts.

This issue also includes news about robocalls, broadband, accessible gaming, adaptive sporting gear, DeepASL, artificial intelligence, Everyone Can Code, and more.

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

[Regulatory Activities](https://gtvault-my.sharepoint.com/personal/mz22_gatech_edu/Documents/wiRERC_2016%20-%202021/TDPH/August%202018/Technology%20and%20Disability%20Policy%20Highlight%20%28TDPH%29_%20August%202018.docx#regulatoryactivities) [Wireless RERC Updates](https://gtvault-my.sharepoint.com/personal/mz22_gatech_edu/Documents/wiRERC_2016%20-%202021/TDPH/August%202018/Technology%20and%20Disability%20Policy%20Highlight%20%28TDPH%29_%20August%202018.docx#wirelessrercupdates) [Other Items of Interest](https://gtvault-my.sharepoint.com/personal/mz22_gatech_edu/Documents/wiRERC_2016%20-%202021/TDPH/August%202018/Technology%20and%20Disability%20Policy%20Highlight%20%28TDPH%29_%20August%202018.docx#otheritemsofinterest) [Upcoming Events](https://gtvault-my.sharepoint.com/personal/mz22_gatech_edu/Documents/wiRERC_2016%20-%202021/TDPH/August%202018/Technology%20and%20Disability%20Policy%20Highlight%20%28TDPH%29_%20August%202018.docx#Upcomingevents)

**Regulatory Activities**

**FCC Urges Phone Service Carriers To Input Caller Authentication Systems**

February 26, 2019 - In November, major wireless carriers were issued a letter that required they adopt the industry’s framework for best practices on mitigating “spoofing.” The act of “spoofing” is when the origin of a fraudulent number is hidden from a person’s caller ID by robocallers. On February 7th, FCC Chairman, Ajit Pai, demanded the implementation of caller authentication systems as outlined by the best practices framework. The FCC warned that there would be regulatory intervention if these major wireless carriers did not comply. [Source: Matthew J. Belvedere, CNBC]

#### Additional Information:

The FCC's Push to Combat Robocalls & Spoofing

[https://www.fcc.gov/about-fcc/fcc-initiatives/fccs-push-combat-robocalls-spoofing]

[Robocalls are rampant despite the Do Not Call list — FCC urges phone providers to help stop them](https://www.cnbc.com/2019/02/26/fcc-warns-phone-providers-to-help-stop-robocalls-or-face-regulations.html)

**Disability Advisory Committee (DAC) Enters Its Third Term**

February 20, 2019 – The *Notice of Renewal of the Disability Advisory Committee’s Charter* [DA 19-55] was published in the Federal Register, starting the third two-year term for the DAC. In accordance with the Federal Advisory Committee Act, the DAC will provide policy guidance to the FCC, assist in educating the public on disability-related matters, and facilitate the participation of consumers with disabilities. The Committee will address, among other things, hearing aid compatibility, advanced communications and equipment services, telecommunications equipment and services, and 9-1-1 access. Working groups and subcommittees are anticipated to form to allow for specialized attention to the complex issues of reconciling technical capabilities with consumer access. [Source: FCC]

#### Additional Information:

[Notice of Renewal of the Disability Advisory Committee’s Charter](https://www.govinfo.gov/content/pkg/FR-2019-02-20/pdf/2019-02780.pdf)

[<https://www.govinfo.gov/content/pkg/FR-2019-02-20/pdf/2019-02780.pdf>]

[Disability Advisory Committee](https://www.fcc.gov/disability-advisory-committee)

[<https://www.fcc.gov/disability-advisory-committee>]

**E-Reader Accessibility Waiver For Manufacturers Granted by FCC**

February 7, 2019 - The Consumer and Government Affairs Bureau (CGB) of the FCC released an Order [**CG Docket No. 10-213**] extending the report submission deadline for the Coalition of E-Reader Manufacturers to March 5, 2019. The purpose of this report was to examine the extent that Advanced Communications Services (ACS) have “become a primary or co-primary purpose of e-readers.” E-readers are digital devices that consumers can utilize to read digital books and magazines. In 2016, basic e-readers were granted indefinite waivers of the ACS accessibility requirements outlined by the FCC’s implementation of the *Twenty-First Century Communications and Video Accessibility Act*, but in granting this, the CGB required that a report on e-readers’ accessibility issues be submitted by February 1, 2019. The following week the waiver was granted. [Sources: FCC; InCompliance]

#### Additional Information:

[Order [CG Docket No. 10-213]](https://docs.fcc.gov/public/attachments/DA-19-54A1.pdf)

[<https://docs.fcc.gov/public/attachments/DA-19-54A1.pdf>]

[FCC Grants Brief Extension for E-Reader Manufacturers on Accessibility](https://incompliancemag.com/fcc-grants-brief-extension-for-e-reader-manufacturers-on-accessibility/)

[<https://incompliancemag.com/fcc-grants-brief-extension-for-e-reader-manufacturers-on-accessibility/>]

**Broadband Subsidies in Tribal Lands Will Continue: FCC Ruling Reversed**

February 4, 2019 - Recently, the FCC attempted to cut broadband subsidies to tribal lands that would limit the $25 monthly Lifeline subsidy to low-income tribal homes. A federal appeals court in D.C issued a stay order and temporarily reversed this decision. The court cited the discriminatory nature and implications of this policy ruling. For some tribal lands, a loss in the monthly Lifeline subsidy would either reduce or eliminate communications. The court also argued that smaller phone carriers that collaborate with the federal government to provide this service to tribal lands would likely go out of business because of the massive loss of customers. The judges in this federal appeals court struck down the FCC’s argument that their ruling would lead to these smaller phone carriers developing their own networks in the tribal areas. Finally, the court admonished the FCC in their ruling for not following “basic procedures, [and not allowing for] adequate opportunity for comment.” With less than a two-week notice for stakeholder input, the notice was also criticized for not including a discussion of the implications of the decision on low-income tribal homes. The FCC challenged this stay order; as of now, however, the FCC must maintain rules that allow for eligible tribal homes to receive the $25 monthly Lifeline subsidy. [Sources: United States Court of Appeals; Jon Fingas, Engadget]

#### Additional Information:

[Opinion for the court filed by Circuit Judge ROGERS.](https://www.cadc.uscourts.gov/internet/opinions.nsf/8E6B91FC5437D2D9852583940053BC87/%24file/18-1026.pdf)

[https://www.cadc.uscourts.gov/internet/opinions.nsf/8E6B91FC5437D2D9852583940053BC87/$file/18-1026.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/8E6B91FC5437D2D9852583940053BC87/%24file/18-1026.pdf)

[FCC loses bid to cut tribal broadband subsidies](https://www.engadget.com/2019/02/04/fcc-loses-tribal-broadband-subsidy-ruling/)

<https://www.engadget.com/2019/02/04/fcc-loses-tribal-broadband-subsidy-ruling/>

**Wireless RERC Updates**

**Tell Us About Your Wireless Devices! Take and Share the SUN Survey.**

To inform the inclusive development of wireless technologies and services, the Wireless RERC is collecting data on people with disabilities’ user experiences and expectations.

Your responses will:

1. Help designers and engineers make more accessible wireless devices and services for people with disabilities.
2. Inform recommendations to better ensure inclusive policies and practices.

Take the survey online at

<http://bit.ly/2018UserNeedsSurvey>

Or

To take the survey by telephone contact: Salimah LaForce at 404-894-8297

**TDPH’s Top 25 Topics of 2018**

This past year’s hot topics included the increased development of wireless technologies and next-generation connected devices, continued expansion in disability-focused research, emergency communications access, and improved access to assistive devices and public spaces. The top five words by frequency in the 2017 and 2018 TDPH’s were similar, varying only slightly. In descending order, the top five most cited words for 2018 were: emergency, services, research, communications, and inclusive. The topic that experienced the greatest shift from 2017 to 2018 was research, shifting from 19th in 2017 to 2nd in 2018. 2018 had a greater frequency over 2017 on the topics of legislation, research, and services/technologies, and innovation. Also, noteworthy, the word information was our 3rd most cited word in 2017 and did not even reach the top 50 2018 list, indicating a shift in focus from digital content to digital devices/services.

This year’s influx of research regarding best policy and practices demonstrated progression towards an inclusive global environment, and legislative and regulatory activities were responsive to many of the advances in technology. This year was also full of exciting celebrations as we acknowledged the 28th anniversary of the Americans with Disabilities Act, the 50th anniversary of the universal symbol of disability, the 40th anniversary of NIDILRR, and International Persons with Disability Day. These monumental occasions were peppered with countless celebratory, awareness, and capacity building activities.

Throughout 2018, the FCC sought stakeholder input on regulatory, technical and consumer issues related to accessibility in broadcasting, the *Twenty-First Century Communications and Video Accessibility Act (CVAA) Biennial report*, and emergency communications. Regarding the latter, the FCC released a report, *Refresh the Record on Facilitating Multimedia Content in Wireless Emergency Alerts (WEA)*, that supported the inclusion of multimedia content in WEA messages. Later in the year, the FCC approved FEMA’s request for a waiver allowing them to conduct the first nationwide test of WEA in September of 2018. The Wireless RERC asked personnel and partners to observe the test and to describe their experiences. Commonly reported issues with the WEA test included: accessibility, inconsistencies based on carrier and or device, and the message format.

The FCC also ruled on “next generation” broadcast television standards. In the *Authorizing Permissive Use to the “Next Generation”* *Broadcast Television Standard* Report and Order, the next-generation transmission standards became effective in March 2018. In the spring of this past year, the FCC released a proceeding, *In the Matter of Misuse of Internet Protocol (IP) Captioned Telephone Service (CTS); Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, that allowed for the use of automated speech-to-text technologies for the provision of captions on IP-CTS. The FCC also adopted a Report and Order, *In the Matter of Revisions to Reporting Requirements Governing Hearing Aid-Compatible Mobile Handsets* and required that the service providers should offer hearing-aid compatible devices, a rating of these devices, and an explanation of the rating system. The FCC published many other rulings and revised regulations including improving wireless resiliency in the wake of a disaster.

In the legislative realm, there was constant discussion and votes on several bills. The American Bar Association’s (ABA) House of Delegates brought forth House Resolution 116C that expanded Title II and Title III of the ADA to include in its interpretation of public accommodations, digital “places,” devices and applications. It was unanimously approved. Earlier in the year, Senator Casey [D-PA] introduced the *Office of Disability Policy Act of 2018* [**S. 3261**] to establish the Office of Disability Policy in the legislative branch. The bill was assigned to the Committee on Homeland Security and Governmental Affairs for further review. The House also passed *The Federal Aviation Administration Reauthorization Act of 2018*, [**H.R. 302**], now Public Law 115-254, which improves air travel for consumers with a disability by correcting access barriers. Congress also debated and addressed autonomous vehicles legislation and bias in artificial intelligence. Meanwhile, the states’ assistive technology programs expanded last year with some states incorporating smart technologies such as smart home devices and robotic telepresence among their offerings.

This past year was also imbued with technological advances from different startups, major technological companies, and scientists. Some of these developments include Mapp4All, Right Hear, Hopkins PD App, AlterEgo, Social Robots, TalkBack, “Smart” prosthetics, and advanced assistive garments such as gloves, glasses, and pants. These developments, some on the market and others still in the creation phase, show great promise for improving access and inclusion of individuals with disabilities.

2018 at the Wireless RERC was eventful! We hosted a workshop, attended and presented at conferences, and engaged with industry stakeholders, academics, practitioners, and service organizations to discuss prevalent issues in the arena of technology for persons with disabilities. Wireless RERC researchers submitted comments to the FCC discussing the accessibility of mobile phones and other emerging technologies and followed with a *Mobile Phone Accessibility Report* to support the initial response. We also produced reports ranging from workforce participation of people with disabilities to the usability of next-generation wireless devices. Equally as active in technology and disability-related projects and product development were Georgia Tech faculty who were also cited frequently in hearings. The Wireless RERC is proud of the progressive research conducted at the Center for Advanced Communications Policy and will continue to advance accessibility towards the social inclusion of people with disabilities.

[**Social and Cultural Acceptance of Next-Generation Wireless Devices**](http://www.wirelessrerc.gatech.edu/new-wireless-rerc-research-brief-accessibility-usability-and-social-and-cultural-acceptance-next)

A new research brief by CACP researchers Nathan W. Moon, Paul M.A. Baker, and Kenneth Goughnour, summarizes findings from focus groups which explored accessibility, social appropriateness, and cultural acceptability issues of wireless technology related use among individuals with disabilities. The research was conducted for the Wireless RERC. A total of 41 individuals with disabilities who use smartphones, wearables, and "smart home" devices participated in the study.

#### Additional Information:

[Accessibility, Usability, and Social and Cultural Acceptance of Next-Generation Wireless Devices: Initial Findings from Focus Group Research](wireless-rerc-research-brief-18-01-1.pdf)

[[wireless-rerc-research-brief-18-01-1.pdf](http://www.wirelessrerc.gatech.edu/sites/default/files/wireless-rerc-research-brief-18-01-1.pdf)]

**Wireless RERC Publishes Mobile Phone Accessibility Review**

February 4, 2019 - The FCC has a statutory obligation to evaluate the impact of their regulations that implement the Twenty-First Century Communications and Video Accessibility Act (CVAA). Every two-years the FCC submits a report to Congress on the state of industry compliance with the CVAA. In anticipation of the FCC’s call for stakeholder input to inform their 2018 CVAA Biennial Report, the Wireless RERC conducted a 2017 Mobile Phone Accessibility Review. Preliminary results of the review were submitted to the FCC[[i]](http://www.wirelessrerc.gatech.edu/wireless-rerc-publishes-mobile-phone-accessibility-review%22%20%5Cl%20%22_edn1%22%20%5Co%20%22) in response to their request for “input on the state of accessibility of “mobile” or wireless services, including basic phones and feature phones (collectively referred to herein as non-smartphones), as well as smartphones.”[[ii]](http://www.wirelessrerc.gatech.edu/wireless-rerc-publishes-mobile-phone-accessibility-review%22%20%5Cl%20%22_edn2%22%20%5Co%20%22) This report contains the full summary and comparative analyses.

#### Additional Information:

[Mobile Phone Accessibility Review](analysis_of_accessibility_features_on_mobile_phones_final.docx)

[[analysis\_of\_accessibility\_features\_on\_mobile\_phones\_final.docx](http://www.wirelessrerc.gatech.edu/sites/default/files/analysis_of_accessibility_features_on_mobile_phones_final_0.docx)]

[Mobile Phone Accessibility Improves, But Gaps Remain, Study Finds](http://www.rh.gatech.edu/news/617650/mobile-phone-accessibility-improves-gaps-remain-study-finds)

[<http://www.rh.gatech.edu/news/617650/mobile-phone-accessibility-improves-gaps-remain-study-finds>]

**Nathan Moon gives presentation at State of the Science conference**

Nathan Moon, of the Center for Advanced Communications Policy and the Wireless RERC, and Fran Harris, Center for Inclusive Design and Innovation, recently gave an invited presentation at the State of the Science Conference for the University of New Hampshire's Rehabilitation Research and Training Center on Employment Policy and Measurement (EPM-RRTC). The conference was held at the National Academy of Sciences Building in Washington, D.C., on February 12, 2019. The presentation, titled "Contingent Employment of Individuals with Disabilities: Key Issues and Challenges," shared preliminary findings from Year 1 of their Field Initiated Project on Contingent Employment of Individuals with Disabilities (FIP-CE), which is funded by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR).

#### Additional Information:

[View the Presentation](http://cacp.gatech.edu/sites/default/files/Contingent%20Employment%20of%20Individuals%20with%20Disabilties.pdf): [Contingent Employment of Individuals with Disabilities Presentation](http://cacp.gatech.edu/sites/default/files/Contingent%20Employment%20of%20Individuals%20with%20Disabilties.pdf%22%20%5Co%20%22Contingent%20Employment%20of%20Individuals%20with%20Disabilties.pdf)

[[http://cacp.gatech.edu/sites/default/files/Contingent%20Employment%20of%20Individuals%20with%20Disabilties.pdf]](http://cacp.gatech.edu/sites/default/files/Contingent%20Employment%20of%20Individuals%20with%20Disabilties.pdf%22%20%5Co%20%22Contingent%20Employment%20of%20Individuals%20with%20Disabilties.pdf)

**Other Items of Interest**

**Adaptive Gaming Tools for Xbox Controller**

February 19, 2019 - The latest sequel to *Metro: Last Light* was recently released; however, this video game is unlike its other companions. *Metro Exodus* is now available on the Xbox, and gamers soon found it to be accessible to people with disabilities. One feature that stood out was the Xbox Adaptive Controller Support. This controller allows for people with limited mobility to engage with the video game. However, the Xbox Adaptive Controller is only useful when developers create games that are compatible with this device. The Xbox Adaptive Controller worked closely with Microsoft to fuse with Metro Exodus and provide a seamless gaming experience. The settings of Metro Exodus have also been adjusted to support a variety of accessibility accessories. This release demonstrates how the gaming industry is complying with the FCC’s regulation published last month that asserted all gaming systems must comply with the standards set in the CVAA. [Source: Asher Madan, WindowsCentral]

#### Additional Information:

[Metro Exodus is further streamlined for the Xbox Adaptive Controller](https://www.windowscentral.com/metro-exodus-further-streamlined-xbox-adaptive-controller)

[<https://www.windowscentral.com/metro-exodus-further-streamlined-xbox-adaptive-controller>]

**Adaptive Sporting Gear Increases Inclusivity**

February 17, 2019 - Ability360, a non-profit organization, is dedicated to developing, empowering, and mobilizing people with disabilities through its adaptive sporting gear, specifically the Paramobile chair. This chair was co-invented by Anthony Netto and the Stand Up & Play Foundation. The Paramobile chair is designed to maneuver through rough or uneven terrain which is suitable for sporting events such as golf courses, archery, shooting, or fishing. According to Business News, the seat and chair back can also lift the user into a standing position. This, and other features and functions of the Paramobile chair, enables people with disabilities who desire to be physically active to do so. The story highlights Navy veteran Diego Suazo who was a victim of a club shooting which left him paralyzed from the waist down. Suazo found adaptive golf through the Paramobile chair and used it to help with his recovery process. Suazo, the Navy veteran, describes the Paramobile chair as a tool that has increased his mobility and independence. [Source: BusinessNews, AzBigMedia]

#### Additional Information:

[Technology makes adaptive golf accessible to disabled](https://azbigmedia.com/technology-makes-adaptive-golf-accessible-to-disabled/)

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[https://azbigmedia.com/technology-makes-adaptive-golf-accessible-to-disabled/]](https://azbigmedia.com/technology-makes-adaptive-golf-accessible-to-disabled/%5D)

**National Advisory Committee Report Recommends Access Improvements**

February 15, 2019 - In 2015, the *Integrated Public Alert and Warning Systems (IPAWS) Modernization Act* [**Public Law 114-143**] mandated that FEMA construct a National Advisory Council. The NAC consisted of 45 members, including Frank Lucia who represented the Wireless RERC on the IPAWS Subcommittee. Over the two-year term of the NAC and Subcommittee, the members generated recommendations to enhance the delivery and efficacy of emergency messages in the event of a natural or human-made disaster. The purpose of the NAC was to ensure that the public alert and warning system met, among others, the following objectives [verbatim]:

* Incorporates multiple communications technologies.
* Adapts to and incorporates future technologies for communicating directly with the public.
* Provides alerts to the largest portion of the affected population which includes non-resident visitors and tourists; individuals with disabilities, access and functional needs; individuals with limited English proficiency; and improves the ability of remote areas to receive alerts.

On February 15, 2019, the NAC published its final report, *Modernizing the Nation’s Public Alert and Warning System*. The Report includes 14 recommendations to meet the stated goals. Four of the recommendations were related to wireless technology and access by people with disabilities. In response to the increasingly diverse composition of the U.S., the subcommittee suggests “FEMA should lead the development of a comprehensive standard set of visual symbols/pictograms, transcripts, and captioning so diverse populations receive and understand alerts.” To accomplish this, FEMA should advance current technological capabilities to increase accessibility and coordinate with other agencies to implement the capability to display messages in multiple languages. Another critical recommendation urges FEMA to improve the nation’s emergency alerting system’s capabilities. To complete this goal, the report states that FEMA should work with the Department of Homeland Security Science and Technology Directorate (DHS S&T) to “evaluate automated translation technologies and develop metrics for accuracy and effectiveness of translated alerts.” The IPAWS Subcommittee prompted FEMA to provide “guidance, specifications, and best practices to make alert and warning[s] more effective” and seek input from stakeholders on methods to improve alert distribution. “An ideal future state would enable a single message origination to transmit automatically to multiple types of devices and channels based on each device’s ability to present the input to the user in the most accessible manner.”

This critical report is timely as FEMA assesses its September 2018 nationwide Wireless Emergency Alert (WEA) test and considers other reports, such as the [*Analysis of Accessibility Feature on Mobile Phones*](http://www.wirelessrerc.gatech.edu/wireless-rerc-publishes-mobile-phone-accessibility-review) published in January of 2019, by the Wireless RERC identifying accessibility levels of WEA-capable devices, among other things. [Source: FEMA]

#### Additional Information:

[Modernizing the Nation’s Public Alert and Warning System](https://www.fema.gov/media-library-data/1550587427456-30d4179ee4fa8b97ecf4ab6bee76ace6/NAC_IPAWS_Subcommittee_Final_Report.pdf)

[<https://www.fema.gov/media-library-data/1550587427456-30d4179ee4fa8b97ecf4ab6bee76ace6/NAC_IPAWS_Subcommittee_Final_Report.pdf>]

**Sign Language Translator Improves Accessibility**

February 15, 2019 - Engineering professors at Michigan State University are developing a solution to address issues with sign language translation. Zhang, the lead researcher, illustrates the communication challenges of people who utilize American Sign Language (ASL) as their primary means of communication through the example of a person who is Deaf attempting a doctor’s visit without an interpreter. In response to this need, this team of electrical and computer engineering researchers developed Leap Motion. It is a portable sensory device, about three inches long, that converts a person’s hand and finger motions into skeleton-like joints. The Leap Motion’s algorithm assesses the data from the skeleton-like joints and matches it to ASL signs. It then translates sign language to verbal English. Leap Motion’s learning formula also includes a feature, similar to Siri, that allows users to sign certain words so that the sensors can better pick up signs.

The technology behind Leap Motion’s fluidity is called DeepASL. According to the developers, this feature can interpret full sentences without the user pausing and waiting for the device. It is intended to enable a seamless flow of conversation which mitigates the problem that other interpreting devices face: awkward and slow conversations. DeepASL can also provide ASL learners, like hearing parents, with the opportunity to receive real-time feedback on their ASL signing skills. Though it is not yet compatible with mobile devices, the researchers intend to continue developing the portable device and expand its sign languages to include more than ASL. [Source: Caroline Brooks, FUTURITY]

#### Additional Information:

[Sign-Language Translator is as Portable as Chapstick](https://www.futurity.org/sign-language-translator-1984022/)

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[https://www.futurity.org/sign-language-translator-1984022/]](https://www.futurity.org/sign-language-translator-1984022/%5D)

**Call for Papers: Research Conference on Communications, Information and Internet Policy**

February 13, 2019 **-** The Technology Policy Research Center (TPRC) aims to facilitate an interdisciplinary exchange of thought on existing and emerging issues in communications and the Internet. To accomplish this, the TPRC regularly publishes new research relevant to policy pertaining to technology, communications, and the internet. The policy implications are diverse and range from voice, video and data communications using wireless networks to traditional mass media and technological convergence. The researchers that publish this work come from a variety of backgrounds such as law, economics, engineering, computer science, public policy, as well as researchers in academia, industry, government, and non-profits.

The TPRC47: Research Conference on Communications, Information and Internet Policy is calling for paper, poster, and panel submissions for their 47th Conference. They are also looking for individuals interested in participating in their Student Paper Competition, the Graduate Student Consortium, and the Charles Benton Early Career Scholar Award. TPRC requests that all research proposals by professionals be submitted by **March 15,** and students submit by **April 30**. The application, deadlines, and other important information can be found on their website: <http://www.tprcweb.com/>

#### Additional Information:

[TPRC Call for Papers](http://www.tprcweb.com/call-for-paper-proposals)

[<http://www.tprcweb.com/call-for-paper-proposals>]

**Artificial Intelligence Meets Assistive Devices**

February 6, 2019 - U.K. Researcher, Dr. Konstantinos Sirlantzis, at the University of Kent recently conceptualized a smart wheelchair that is activated by robotic plug-ins and add-ons. This project is entitled: *Assistive Devices for Empowering Disabled People through Robotic Technologies* (ADAPT). According to Sirlantzis, the focus of this project is to increase persons with disabilities’ independence and quality of life. Some of the wheelchair’s capabilities include: tracking the movement of a person’s head, eye, and nose movement to control a wheelchair, and adaptation to the user’s abilities as time progresses and conditions change. Artificial Intelligence (AI) is embedded in the very core of the design. It is programmed to assess the physiological and emotional state of the user as well as the user’s driving preferences. The AI is cloud-connected, so it is constantly storing information as it learns. However, Sirlantzis plans to ensure that this ADAPT model is well-done and hopes to consider 5G connectivity as it becomes available. He explains that 5G connectivity would allow the wheelchair to process its environment, geotag events, and then upload them to the cloud. The smart wheelchair will eventually include intelligent autonomous 3D mapping. Sirlantzis cites costs as a potential barrier to implementation; however, 3D mapping allows for ease of access and driving for the user. But while the research team figures out this feature, they have managed to include smart automation such as Wi-Fi and Bluetooth communication to help with parking and maneuvering the environment in real-time. The ADAPT research team also recruited ten persons with a disability to test the product’s appropriateness for the targeted population. Notwithstanding cost, if realized, this smart assistive device could improve upon the inclusivity of public spaces.

#### Additional Information:

[These Modular, AI Wheelchairs Can Watch for Obstacles Ahead](https://uk.pcmag.com/news/119508/these-modular-ai-wheelchairs-can-watch-for-obstacles-ahead)

<https://uk.pcmag.com/news/119508/these-modular-ai-wheelchairs-can-watch-for-obstacles-ahead>

**Coding Made Accessible to Students with Disabilities**

February 5, 2019 - Recently, Apple released new coding curricula called Everyone Can Code (ECC) which is compatible with Apple’s programming language Swift.  Everyone Can Code is designed for students from kindergarten to college, and beyond, with visual, hearing, and physical disabilities. ECC’s curricula teach students with disabilities how to read and write code. Portions of the curricula utilize puzzle solving and allow students to control characters to build their first iOS app. Also included in the coding curricula package are “pre” lessons designed to familiarize non-visual learners with coding environments and increase their understanding of the coding system. These resources include a Coding Concepts Video in ASL, Accessible Learn to Code 1 & 2 Teacher Guide, Swift Playgrounds Tactile Puzzle Worlds, and tactile maps.

Apple’s team coordinated with educators from communities of people who are Deaf and blind as well as engineers and programmers. The development of this program includes accessibility features such as FaceTime, LED Flash for Alerts, Mono Audio, Switch Control, and Made for iPhone hearing aids. The programming language is also compatible with VoiceOver. By increasing the number of learners with sensory disabilities who can utilize Swift coding, it opens the doors for these students to have opportunities and careers in the technology field. [Sources: Telecommunications for the Deaf and Hard of Hearing, Inc.; Apple]

#### Additional Information:

[Apple Expands Coding Resources: Coding Concepts Video in ASL](https://tdiforaccess.org/2019/02/apple-expands-coding-resources-coding-concepts-video-in-asl/?utm_source=eNote+Subscribers&utm_campaign=43c73b1562-Jan+2019+eNote&utm_medium=email&utm_term=0_b8c2cf2e2d-43c73b1562-7717025)

<https://tdiforaccess.org/2019/02/apple-expands-coding-resources-coding-concepts-video-in-asl/?utm_source=eNote+Subscribers&utm_campaign=43c73b1562-Jan+2019+eNote&utm_medium=email&utm_term=0_b8c2cf2e2d-43c73b1562-7717025>

[Apple’s Teaching Code Resources](https://www.apple.com/education/teaching-code/#accessibility)

<https://www.apple.com/education/teaching-code/#accessibility>

Upcoming Events

**Leadership Luncheon, Contexts of Connectivity**

The Wireless RERC will convene its Leadership Luncheon on Thursday, April 25, 2019, at the Center for Inclusive Design and Innovation in Atlanta, Georgia. Join us for a discussion on how smart connected devices can enhance access to public and private environments and support the independent living of people with disabilities.

#### Additional Information:

[Event Details](http://www.wirelessrerc.gatech.edu/wireless-rerc-leadership-luncheon-contexts-connectivity)

[<http://www.wirelessrerc.gatech.edu/wireless-rerc-leadership-luncheon-contexts-connectivity>]

**2019 CSUN Assistive Technology Conference**

The 34th *CSUN Assistive Technology Conference* (CSUN) will convene March 11 through March 19, 2019, 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:

[Conference Web Page](http://www.csun.edu/cod/conference/2019/sessions/index.php/)

[<http://www.csun.edu/cod/conference/2019/sessions/index.php/>]

**AAAED 45th National Conference and Annual Meeting**

Save the datefor the 45th National Conference and Annual Meeting to be held June 11 through 13, 2019 in Indianapolis, IN. The theme will be “Moving Beyond Diversity Towards Equity and Inclusion.”

#### Additional Information:

If you would like to join the Committee, please email us at [Conference2019@aaaed.org](Conference2019%40aaaed.org).

**Association for Public Policy Analysis and Management (APPAM) 2019**

APPAM 2019 will convene July 29 through 30, 2019 in Barcelona, Spain. Co-hosted by [The Johns Hopkins University - University Pompeu Fabra (JHU-UPF) Public Policy Center](https://www.upf.edu/web/jhu-ppc), this year’s theme is “Public Policy in an Era of Rapid Change.” A global perspective will be taken at this conference with a particular emphasis on informing policies that address social inequalities.

#### Additional Information:

[APPAM 2019](http://www.appam.org/2019-international-conference/)

[<http://www.appam.org/2019-international-conference/>]

**Technology and Disability Policy Highlights, February 2019**



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](file:///C%3A%5CUsers%5Csalimah%5COneDrive%20-%20Georgia%20Institute%20of%20Technology%5CwiRERC_2016%20-%202021%5CTDPH%5CApril%202017%5Csalimah%40cacp.gatech.edu)] or Dara Bright [dara.bright@cacp.gatech.edu].

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

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