TECHNOLOGY AND DISABILITY POLICY HIGHLIGHTS – DECEMBER 2019

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OVERVIEW

In December, the *Telephone Robocall Abuse Criminal Enforcement and Deterrence (TRACED) Act* was signed into law [**Public Law No: 116-105**], a bipartisan legislative effort to reduce the excessive number of robocalls that Americans receive daily. The Federal Communications Commission (FCC or Commission) now has additional tools and flexibilities to combat malicious caller ID spoofing, which will allow the FCC to pursue scammers. The law also extends the statute of limitations for the FCC to criminally pursue violators.

The *Bridging the Digital Divide for Low-Income Consumers* [**WC Docket No.s 17-287 and 09-197**] proposed rule was published in the Federal Register, establishing the comment and reply comment dates as January 27, 2020, and February 25, 2020, respectively. The FCC seeks feedback on making "increased broadband adoption for consumers who, without a Lifeline benefit, would not subscribe to broadband" a new goal of the program. They are seeking input on their statutory authority to add a broadband adoption goal to the Lifeline program, as well as recommendations on methods and measures to evaluate progress towards achieving such a goal, as well as the established goals of the program. Specifically, the Commission is interested in research designs and methods that can claim causality so that they can more confidently evaluate the effectiveness of the Lifeline program.

In Wireless RERC news, we will host a fun and interactive Inclusive Design Thinking workshop on Wednesday, January 29, 2020, during the annual Assistive Technology Industry Association (ATIA) Conference. Whether you identify as an individual from the community, a practitioner, a technologist, a designer, or you are just interested in joining with others from a variety of backgrounds; you will learn to apply design thinking towards accessible and assistive tech design and brainstorm innovative ideas and solutions to everyday challenges. **CEU/CRC credits are offered.** Visit **http://bit.ly/UDesign-ATIA** for more information and to register today!

This issue also includes news about socially inclusive mobility, social machines, universal design, ATIA20, AI and signed languages, the International Telecommunication Union, disability statistics, and more.

LEGISLATIVE ACTIVITIES

TRACED ACT SIGNED INTO LAW

December 2019 – This month, the *Telephone Robocall Abuse Criminal Enforcement and Deterrence (TRACED) Act* was signed into law [**Public Law No: 116-105**], a bipartisan legislative effort to reduce the excessive number of robocalls that Americans receive daily. The law gives the FCC increased enforcement authority against illegal robocallers and requires phone carriers to implement call authentication technology. The new law also gives the FCC the power to extend their criminal pursuit with a longer statute of limitations by up to four years, including first-time offenders. The FCC was given a prime deterrent tool to reduce robocallers, civil penalties of up to $10,000 per call (in certain instances). [Sources: 116th Congress (2019-2020); Bevin Fletcher via FierceWireless]

ADDITIONAL INFORMATION:

TRACE Act Public Law No: 116-105

https://www.congress.gov/bill/116th-congress/senate-bill/151

President Trump signs TRACED Act into law to combat robocalls

HTTPS://WWW.FIERCEWIRELESS.COM/REGULATORY/PRESIDENT-TRUMP-SIGNS-TRACED-ACT-INTO-LAW-TO-COMBAT-ROBOCALLS

REGULATORY ACTIVITIES

FCC PROPOSES LIFELINE PROGRAM GOAL ADDRESS BROADBAND ADOPTION

December – 27, 2019 – The *Bridging the Digital Divide for Low-Income Consumers* [**WC Docket No.s 17-287 and 09-197**] proposed rule was published in the Federal Register, establishing the comment and reply comment dates as January 27, 2020, and February 25, 2020, respectively. The FCC suggests making "increased broadband adoption for consumers who, without a Lifeline benefit, would not subscribe to broadband," a new goal of the program would like stakeholders to comment on the proposal. They are also seeking input on their statutory authority to add a broadband adoption goal to the Lifeline program, as well as recommendations on methods and measures to evaluate progress towards achieving such a goal, as well as the established goals of the program. Specifically, the Commission is interested in research designs and methods that can claim causality so that they can more confidently evaluate the effectiveness of the program. The FCC also seeks comment on other issues related to the program, including privacy training for those authorized to access Lifeline subscriber data, and improving the integrity of the program including "demonstrating compliance with usage requirements, and the" de-enrollment process," among other issues.

ADDITIONAL INFORMATION:

[Bridging the Digital Divide for Low-Income Consumers](#) [TEXT] [PDF]

https://www.govinfo.gov/content/pkg/FR-2019-12-27/pdf/2019-27221.pdf

WIRELESS RERC UPDATES

WIRELESS RERC DESIGN THINKING WORKSHOP AT ATIA 2020

The Wireless RERC will host a fun and interactive Inclusive Design Thinking workshop on Wednesday, January 29, 2020, during the annual Assistive Technology Industry Association (ATIA) Conference. Whether you identify as an individual from the community, a practitioner, a technologist, a designer, or you are just interested in joining with others from a variety of backgrounds; you will learn to apply design thinking towards this problem space to brainstorm innovative ideas and solutions to everyday challenges. **CEU/CRC credits are offered.**

This workshop will be a guided session to apply design thinking, and you will learn how this process is applicable across different industries. In this interactive session, you will learn to:

- Build empathy with target users
- Learn about design thinking
- Develop a deeper understanding of problem space
- Brainstorm possible solutions

Visit **http://bit.ly/UDesign-ATIA** for more information and to register today!

OTHER ITEMS OF INTEREST

TOYOTA STARTUP AWARDS' CALL FOR COMPETITORS

December 26, 2019 – The Toyota Startup Awards, sponsored by Toyota Motor Europe (TME) and Business school ISDI using their ISDI Accelerator, are accepting applications now until January 26, 2020, to be considered for the opportunity to pitch their mobility solutions to an expert panel. Winners will join Toyota's Accelerator Program, to bring their ideas to market. Startups interested in participating in the competition must address [verbatim]:

- Socially inclusive mobility: Mobility solutions that are created to meet the unfulfilled mobility needs of people with a physical impairment, elderly and children, as well as people living in suburban areas.
- Accessibility: Provide innovative approaches that increase the accessibility to mobility solutions and thereby enable a "Mobility for All" future.

- Disruptive Mobility: Development of new products, services, tools, technologies and/or disruptive business models that can contribute to a "Mobility for All" future.

ADDITIONAL INFORMATION:

Startups are invited to apply at http://toyotastartupawards.com/

Toyota Motor Europe Launches the Toyota Startup Awards to Find Most Innovative Solutions to Improve Mobility for All

http://globalaccessibilitynews.com/2019/12/26/toyota-motor-europe-launches-the-toyota-startup-awards-to-find-most-innovative-solutions-to-improve-mobility-for-all/

AI MEETS SIGN LANGUAGE AUTOMATION

December 23, 2019 – Developing a method to automatically interpret sign language for digital and media content has been an ongoing research and design issue. While sign language videos and avatars exist, for people who are Deaf, the avatars are often lacking in expressiveness and the capability to incorporate the needed facial expressions and body movements that are part of the language. The Content4All project is using real interpreters and artificial intelligence (AI) algorithms to tackle the long-standing problem of flat affect experienced with ASL avatars. The first step is collecting the data for machine learning. The project's data collection method includes ASL interpreters, remotely interpreting for the news and weather reports, they call this step Live Remote Avatar Puppeteering. To create the avatars or *realatars* (termed coined by Content4All), "interpreters are recorded in a special studio, and their digital replica is created. The Realatar generated in this way can be transferred and displayed to devices: TV, notebooks or tablets." After a sign language database is created, the AI will be trained, and eventually offered as an accessibility option using a "transparent browser overlay that can be displayed above the original TV signal." [Source: EuroScientist]

ADDITIONAL INFORMATION:

A new frontier in automate sign language interpreting with novel technologies and AI algorithms. https://www.euroscientist.com/a-new-frontier-in-automate-sign-language-interpreting-with-novel-technologies-and-ai-algorithms/

ENVISIONING THE FUTURE WITH INFORMATION COMMUNICATION TECHNOLOGIES

December 12, 2019 - The International Telecommunication Union (ITU) hosted two major events that focused on Information Communication Technologies (ICT) across the Americas and Europe. The primary themes at these events include the role of emerging technologies such as artificial intelligence and the design of innovative digital solutions to improve the quality of life of persons

with disabilities. The key topics discussed during the two events included: the role of artificial intelligence; accessibility in education; the development of digital skills for work; ICT accessibility as a business opportunity; procurement and standards; digital innovation ecosystem for assistive technologies; web accessibility; women in ICT; and the future of accessible audio-visual media services.

The first event, Accessible Americas, was held in Quito, Ecuador, from November 20-22, 2019. The Accessible Americas event was organized jointly by the Ministry of Telecommunication and Information Society (MINTEL), Ecuador, and the Universidad de las Americas (UDLA). The conference dialogue detailed the potential that artificial intelligence had on providing people with disabilities access to digital technologies. The stakeholders at the event also evaluated best practices for ICT accessibility to improve the "quality of life of persons with disabilities without discrimination."

The second event, Accessible Europe, was held in St. Julian, Malta, from December 4-6, 2019. The European Commission (EC) and the Malta Parliamentary Secretariat for Persons with Disability and Active Aging (PSDAA) jointly hosted this event. At this event, stakeholders assessed the future of ICT accessibility and its ability to reduce inequalities. They also shared views and expertise on ways to advance the ICT accessibility agenda in the European Region.

Among the highlights of both events were regional competitions on the development of innovative technological solutions for persons with disabilities.

In the Americas region, Enzo Poeta and Carlos Pereira won the competition.

- **Enzo Poeta** developed a program that translates video subtitles from Portuguese into Brazilian sign language (i.e., Libras), which will enable people with hearing disabilities to access online video content for information and entertainment.
- **Carlos Pereira** developed an interactive application that provides speech output for text and images, enabling students with speech disabilities to communicate verbally.

In Europe, the competition had five categories. The awarded winners in each category were:

- ***Deaf or hard of hearing category – Signly.*** Signly is an app that displays pre-recorded sign language videos on a user's mobile device.
- ***Visual impairment category – Waymap.*** Waymap is a personalized platform that sends users maps and live facility data feeds, and supports services such as emergency response, guided tours, and post-visit feedback.
- ***Speech impairment category – IrisGo.*** IrisGo is a standalone eye-tracking technology that allows the user to control a device using the device's webcam (mobile, tablet, PC, or laptop), without the need for additional hardware.

- ***Cognitive and intellectual disabilities category - VR Therapies.*** VR Therapies was designed for children and adults with disabilities to experience a range of activities, such as swimming with dolphins or exploring space.
- ***Physical disabilities category - Mirrorable.*** Mirrorable is a home-based, Action Observation Treatment (AOT), web platform aimed at improving limbs' motor function in people living with Unilateral Cerebral Palsy. [Source: Geneva via ITU]

ADDITIONAL INFORMATION:
ITU members focus attention on the role of emerging technologies in promoting ICT accessibility
https://www.itu.int/en/mediacentre/Pages/2019-CM11.aspx

RETHINKING AND EXPANDING MOBILITY ACCESS

December 3, 2019 - The Social and Sustainable Impact Department and Nino Robotics have recently collaborated to create an accessible mobility solution for people with disabilities. The Nino Robotics company has received funding from Groups Renault via Mobilize Invest to create 'seated, personal transporters.' These devices resemble scooters with one exception; they are seated. The design is sleek and seeks to alter the perception of transport solutions adapted to people with reduced mobility. The seated personal transporter will provide the user with data such as battery charge level, speed, and mileage. It also has a 'Follow Me' function, which grants third party access to guide the transporter by auto-follow.

The Social and Sustainable Impact Department has signed a partnership with Nino Robotics. Pierre Bardina, CEO of de Nino Robotics, shared that: "Nino Robotics was created to meet the mobility needs of all those who walk little, badly or not at all. The concept of NINO4 is to create the desire to use a small electric device with a disruptive design. NINO4 is driven by everyone, including seniors, people with disabilities, or anyone with difficulties in their movements, temporarily or permanently. Because Nino Robotics' design significantly improves self-esteem, it has a very strong influence on the socialization of its users and, by rebound, on their morale and health. The machines created by Nino Robotics are social machines, creating mobility, modernity and connection." [Source: Intelligent Transport]

ADDITIONAL INFORMATION:
Partnership aims to change perception of transport solutions for those with disabilities
https://www.intelligenttransport.com/transport-news/93010/partnership-change-perception-transport-solutions-disabilities/

UTILIZING TECHNOLOGY TO EXPAND MOBILITY ACCESS ACROSS CHICAGO

December 2019 - In the *Toward Universal Mobility* report, the Metropolitan Planning Council declared accessible transportation as a human right. As a case study, they investigate how well transportation in the greater Chicago area meets the mobility needs of people with disabilities and the elderly, and propose a wide-ranging set of policies and programs that will move them closer to universal mobility. According to this study, universal mobility means that everyone — in all stages of life, regardless of any disability — can access transportation options that will get them anywhere they need to go. A practical definition is a system of partnerships and policies that provide a minimum level of mobility to all members of society. Universal mobility combines the philosophy of community mobility with the tenets of universal design. It is the belief that mobility is a human right and that access to high-quality, accessible transportation is fundamental to exercising that right. The report describes the greater Chicago's current system of public transit accessibility for older adults and people with disabilities as fragmented.

To evaluate the comprehensive accessibility of public transportation, MPC worked with a student team from the University of Chicago's Harris School for Public Policy to develop a regional transit accessibility index. The index is comprised of two equally weighted components: the fixed-route index and the paratransit index. The fixed-route index was developed based on a set of weighted characteristics largely adapted from the Chicago Metropolitan Agency for Planning's transit availability index, which includes the following:

- Frequency — weekly average number of times a stop in the area is visited by a fixed-route transit service (bus or train) vehicle.
- Proximity — a measure of the average distance one must travel to reach the nearest transit stop or station.
- Connectivity — the number of activities that can be reached from each area using a single direct transit route without transferring.
- Walkability — sidewalk availability was combined with environmental factors such as block length and population density, plus presence or absence of amenities like supermarkets or schools.

The paratransit index is made up of four equally weighted components and is a measure of access to three types of services: ADA paratransit, Pace On-Demand (formerly Call-n-Ride), and Dial-a-Ride community services operated in partnership with Pace. The components measured in the paratransit index were:

- Service Span — measure of the hours per week that one of the three service types is available in each area.

- Call-in Flexibility — measure of how far in advance a user has to reserve a ride to use the service, with longer times receiving lower scores.
- Service Count — measure of how many overlapping services are available in each area.
- ADA Eligibility — location is within the ADA paratransit service area — within ¾ mile of an eligible CTA or Pace bus or rail station.

After conducting the analysis, the report developed eight recommendations which include: improve service coordination, unlock transportation options with information, improve wayfinding, engage private sector transportation services, upgrade technology to improve the customer experience, improve the final steps of a journey, upgrade the accessibility of the fixed route system, and improve funding structures. To read more about the methodology and recommendations, please check out the link below. [Source: Metropolitan Planning Council]

ADDITIONAL INFORMATION:
Toward Universal Mobility
https://www.metroplanning.org/uploads/cms/documents/universal_mobility_report_dec2_pm.pdf

UPCOMING EVENTS

Assistive Technology Industry Association (ATIA) Conference 2020

ATIA 2020 will convene January 29 through February 1, 2020, in Orlando, Florida. The ATIA Conference addresses all disabilities and all types of assistive technologies that are useful across the lifespan. Sessions and networking events apply to the education market, disability services, technologies for independent living, workplace accommodations, and research and development outcomes.

ADDITIONAL INFORMATION:
ATIA 2020
https://www.atia.org/atia-2020/

ANNUAL RELEASE OF THE DISABILITY STATISTICS COMPENDIUM

The Institute on Disability/UCED has opened its registration for the release of the Annual Disability Statistics Compendium on February 11, 2020, in Washington, DC. The Annual Disability Statistics Compendium provides national and state-level statistics on people with disabilities and the government programs that serve the population. This year they also have two special panels: rural disability statistics and opioid use and behavioral health for people with disabilities.

ADDITIONAL INFORMATION:

[Registration](https://researchondisability.org/annual-compendium-registration?mc_cid=31d55a2aa6&mc_eid=5591b5babc)
https://researchondisability.org/annual-compendium-registration?mc_cid=31d55a2aa6&mc_eid=5591b5babc

CSUN ASSISTIVE TECHNOLOGY CONFERENCE

The 35th CSUN Assistive Technology Conference (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:

[CSUN 2020](https://www.csun.edu/cod/conference/sessions/)
https://www.csun.edu/cod/conference/sessions/

TECHNOLOGY AND DISABILITY POLICY HIGHLIGHTS, DECEMBER 2019

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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.

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