



TECHNOLOGY AND DISABILITY POLICY HIGHLIGHTS – MAY 2020

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OVERVIEW

In May, the world celebrated the Eighth Annual Global Accessibility Awareness Day (GAAD) with virtual events. Microsoft hosted its annual Ability Summit, open to the public, and discussed a variety of disability access and inclusion topics. IBM also celebrated with the launch of an open-source Equal Access Toolkit. This toolkit was created to provide web designers with resources to create accessible websites and applications. Other tech companies, like Apple and Google, released new accessibility features. Globally, organizations such as Prakat Solutions hosted events to connect people in the disability community to resources as well as to raise awareness.

In the regulatory and legislative space, efforts have been directed towards digital access and connectivity. The Federal Communications Commission (FCC) distributed over \$68 million to 185 nonprofit and public eligible health care providers for telehealth services. By the end of May, eight rounds of funding had been granted to eligible providers. The FCC also published a press release updating the public on the outcomes of the Special Temporary Authority (STA) granted to wireless providers to expand broadband connectivity to underserved areas. Similarly, Missouri passed a broadband expansion bill that will bring digital access to over a million Missourians. **House Bill 1768** will grant Missouri broadband providers funds to extend their coverage.

In Wireless RERC news, grant partner the Center for Leadership in Disability at Georgia State University has designed a [**brief survey**](#), open to all professionals, parents/guardians, and individuals with intellectual and developmental disabilities, to share perspective on how wireless technology can be used to create and maintain social connections. We also continue data collection for our [**2020 Survey of User Needs**](#). If you haven't already, please take the [**survey**](#).

This issue also includes news about educational access, connectivity, wearables, COVID19, accessible toys, assistive technology, gaming access, artificial intelligence, ethical design, voting access, a brain-machine interface for a prosthetic arm, and more.

LEGISLATIVE ACTIVITIES

MISSOURI ENSURES BROADBAND ACCESS IN A PANDEMIC

May 19, 2020 — In a sudden turn of events and response to the COVID-19 pandemic, Missouri passed a broadband expansion bill that will bring digital access to over a million Missourians. **House Bill 1768** will grant Missouri broadband providers funds to extend their coverage. The bill will extend the state's broadband grant program through 2027. As the country increasingly relies on digital connectivity to conduct essential business, this bill assists Missourians, who ranks 41st in the nation in broadband access, remain connected. [Sources: Frank Healy via WGEM; Missouri House of Representatives]

ADDITIONAL INFORMATION:

[Broadband expansion bill aims to help bring access to a million Missourians](#)

<https://wgem.com/2020/05/19/broadband-expansion-bill-aims-to-help-bring-access-to-a-million-missourians/>

[House Bill 1768](#)

<https://www.house.mo.gov/Bill.aspx?bill=HB1768&year=2020&code=R>

IDEA WAIVERS GRANTED AFTER DEVOS TESTIFIES

May 1, 2020 — In early April, the U.S. Secretary of Education, Betsy DeVos, considered releasing schools from their special education obligations. After the CARES Act passed in March, Secretary DeVos was given 30 days to issue a report to Congress with recommendations for any waivers she believes are necessary under the Individuals with Disabilities Education Act (IDEA) to provide "limited flexibility" to states and school districts. Though the recommendations do not negate schools' responsibility to continue providing students with disabilities a free appropriate public education (FAPE), the Department of Education notes that how FAPE is achieved may look different in light of the pandemic.

Some groups argue that these "limited flexibility" waivers are simply inadequate. Sasha Pudelski, advocacy director at The School Superintendents Association (SSA), asserted that "meeting all requirements in IDEA is impossible." Ms. Pudelski spoke on behalf of SSA and shared that "[they] support narrow, time-limited, practical flexibility for meeting a few of the over 600 federal requirements in IDEA." Ms. Pudelski emphasizes that SSA did not seek to make any changes to FAPE, but "the inability to complete evaluations that cannot be conducted virtually and to fulfill statutorily designated timelines in this crisis requires temporary flexibility for districts."

On April 27, 2020, Secretary DeVos reported to Congress on additional waiver authority. As it pertains to infant and early child transition services, she recommended that IDEA Part B transition evaluation timelines be extended. Simply stated, children under 3 receiving IDEA services can continue to access these services until an evaluation can be performed on a day in which "health and safety factors allow for face-to-face meetings to resume and the toddler is able to be evaluated." Under IDEA, personnel development scholarships were awarded for teachers, DeVos ruled that work requirements for these teachers could be deferred to avoid penalties incurred as employment was interrupted by the COVID-19 national emergency. DeVos also addressed the Vocational Rehabilitation (VR) program. This program gives states support for integrated employment services to students with disabilities. DeVos granted a waiver that allowed these funds to be rolled over from FY 2019 to FY 2020. IDEA also addresses transitions for students aged 18+ covered under the VR program. DeVos recommended that "states spend not less than 15% of allocated VR funds to provide pre-employment transition services to students with disabilities, and waive minimum funding requirements and matching requirements for the subset of that program reserved for youth with the most significant disabilities." Finally, DeVos' report to Congress grants funds, under IDEA, to be used to replace food products at vending sites once stay-at-home orders are lifted. [Sources: Betsy DeVos via Report to Congress, Michelle Diamant via DisabilityScoop, Jason Zware via NACSA]

ADDITIONAL INFORMATION:

[U.S. Secretary of Education's Betsy DeVos Report to Congress](#)

<https://www2.ed.gov/documents/coronavirus/cares-waiver-report.pdf>

[DeVos Could Recommend Waiving IDEA Protections](#)

<https://www.disabilityscoop.com/2020/04/13/devos-could-recommend-waiving-idea-protections/28146/>

[Updated May 26 | Federal Education Policy Response to COVID-19](#)

<https://www.qualitycharters.org/2020/05/updates-on-federal-response-to-covid-19/>

REGULATORY ACTIVITIES

FCC GRANTS OVER \$68 MILLION TO TELEHEALTH SERVICES

May 28, 2020 — The COVID-19 pandemic response for social distancing and stay-at-home orders rendered hospitals and many healthcare facilities incapable of providing general and mental healthcare services. In efforts to flatten the curve, doctor's offices began limiting their appointments to critical emergency services, leaving many people with chronic health conditions without access to healthcare. The Federal Communications Commission's Wireline Competition Bureau stepped in with

support for healthcare providers to deliver telehealth services as authorized by the CARES ACT. Since late March, the FCC has distributed over \$68 million in funding to 185 nonprofit and public eligible healthcare providers in 35 states and Washington, D.C. This program provides expanded healthcare services for people in rural and urban areas, facilitating access to basic health-related services. The following list highlights some of the healthcare providers that were awarded funding. Notably, the FCC granted these funds in “rounds.” The 8th round of telehealth COVID-19 program applications were approved on the 28th of May. In this round, an additional 53 eligible telehealth providers, in both rural and urban areas, were given \$18.22 million to assist them in providing medical services. In the 7th round of telehealth COVID-19, program applications were approved on the 20th of May, and in this round, 43 providers were granted funds totaling \$16.87 million.

- **Advance Community Health, in Raleigh, North Carolina**, was awarded \$690,671 to fund an integrated telemedicine system, remote monitoring devices, and networking equipment to provide COVID-19 testing, drive-up, and curbside pharmacy services, and remote monitoring to address the risk factors that make vulnerable patients more susceptible to COVID-19.
- **Aspire Health Partners, in Orlando, Florida**, was awarded \$173,037 for connected devices, a patient safety platform, and network equipment upgrades to support the increased need for telehealth services as a result of the COVID-19 pandemic.
- **Blackstone Valley Community Health Care, in Pawtucket, Rhode Island**, was awarded \$108,306 for laptops and other telehealth equipment for the treatment of patients telephonically and through video telehealth, so medical providers, nurses, and medical assistants can work remotely during the COVID-19 pandemic and patients can receive consultations and treatment without having to leave their homes.
- **Bridgeport Hospital, in Bridgeport, Connecticut**, was awarded \$938,960 for medical carts and other telehealth equipment for intensive care to treat patients with chronic and acute illness in a manner that mitigates possible exposure to COVID-19.
- **BronxCare Health System, in Bronx, New York**, was awarded \$539,797 for connected devices, video equipment, and network upgrades to provide voice and video patient consultations as well as remote patient diagnosis, treatment, and monitoring in one of the areas hardest hit by the COVID-19 crisis.
- **Outside In Clinic, in Portland, Oregon**, was awarded \$291,235 for laptops, tablets, mobile hot spots, a telemedicine platform, video monitors, and remote monitoring equipment to increase telehealth capabilities so patients without COVID-19 can access services remotely. At the same time, the clinic can remain open and available for patients who need to be evaluated in person for COVID-19.

- **Public Health Management Corporation, in Philadelphia, Pennsylvania**, was awarded \$202,065 for laptop computers, tablets, phones, a VPN, and network upgrades to leverage telehealth and provide an outlet for underinsured individuals to avoid emergency departments for healthcare needs and reduce the need for patients with COVID-19 to access hospital services wherever possible. [Source: FCC]

ADDITIONAL INFORMATION:

[News Release: Commission Continues Approving Telehealth Funding During Coronavirus Pandemic](#)

<https://docs.fcc.gov/public/attachments/DOC-364481A1.pdf>

[FCC Approves Eighth Set of COVID-19 Telehealth Program Applications](#)

<https://www.fcc.gov/document/fcc-approves-eighth-set-covid-19-telehealth-program-applications>

FCC GRANTS USE OF EXPANDED WIRELESS CONNECTIVITY SPECTRUM

May 4, 2020 — The FCC released a press release updating the public on the outcomes of the Special Temporary Authority (STA) decision made in late March in response to increased demand for digital communications and content access caused by COVID-19. Under the STA, wireless internet service providers (WISPs) were given temporary access to the 5.9 GHz spectrum band to better ensure wireless connectivity, particularly in rural and suburban communities. The STAs were granted to over 100 WISPs, in hopes of increasing wireless access. On May 4th, WISPs provided the FCC with the positive public impacts of the STA. Below are examples of how WISPs utilized the 5.9 GHz band:

- “**Bolt Internet**, based in Prescott, AZ, was able to alleviate a maxed-out backhaul link, reduce congestion on some access points, and upgrade customer speed packages on other access points by using wider channels.”
- “**MJM Telecom Corp**, based in Staten Island, NY, reports “significant increases in quality, speed and reliability” on two towers serving at least 500 customers.”
- “**Wavelinc Communications**, based in Bucyrus, OH, reports the STA has been an “amazing addition” to its ability to provide faster service by using wider channels, helping to meet the 25% increase in bandwidth consumption from stay-at-home orders.”
- “**TCC Skywire NW**, based in Errol, NH, is using the 5.9 GHz STA on three of its critical backhaul links, resulting in a nearly 40% improvement in throughput, providing “great relief” to rural areas in northern New Hampshire.” [Source: FCC]

ADDITIONAL INFORMATION:

[5.9 GHz Band Boosts Consumer Internet Access During Covid-19 Pandemic](#)

<https://www.fcc.gov/document/59-ghz-band-boosts-consumer-internet-access-during-covid-19-pandemic>

FCC RELEASES NOTICE OF PROPOSED RULEMAKING & ORDER ON INTERNET SPECTRUMS

May 19, 2020 — The FCC published a Notice of Proposed Rulemaking (NPRM) and Order to explore potential commercial uses of the 71-76 GHz, 81-86 GHz, 92-94 GHz (more commonly known as the 70/80/90 GHz). Presently, the 70/80/90 GHz is unused in a significant portion of the United States. The NPRM asserts that non-federal and federal entities are underutilizing this spectrum for fixed point-to-point communications links. Many developers who seek to use this spectrum consider it a promising resource as it could open up new offerings such as wireless 5G backhaul and more wireless services on aircraft and ships. The Proposed Order would deny requests for a partial waiver of the FCC's existing antenna standards for the 71– 76 and 81–86 GHz bands.

The NPRM also proposes to:

- Change antenna standards for the 70 and 80 GHz bands to permit the use of smaller antennas.
- Authorize point-to-point links to endpoints in motion in the 70 and 80 GHz bands and classify those links as “mobile” service.

The FCC seeks comment on whether to make similar antenna standard changes in the 90 GHz band, on whether the Commission should change its link registration rules for the 70/80/90 GHz bands to eliminate never-constructed links from third-party registration databases, and on any technical and operational rules necessary to allow new service offerings in the 70 and 80 GHz bands and to mitigate interference to both incumbents and other proposed users of these bands. The comment date is June 20, 2020, and the reply comment date is July 20, 2020. [Source: FCC]

ADDITIONAL INFORMATION:

[Modernizing and Expanding Access to the 70/80/90 GHz Bands](#)

<https://www.fcc.gov/document/modernizing-and-expanding-access-708090-ghz-bands>

WIRELESS RERC UPDATES

Survey on Social Connectedness and Individuals with IDD

The Wireless RERC cordially invites all professionals, parents/guardians, and individuals with intellectual and developmental disabilities to share your perspective on how wireless technology can be used to create and maintain social connections. Your responses and feedback will help mold the future role that wireless technologies and wearables can play in the lives of people with intellectual and developmental disabilities.

Wireless RERC partner, the Center for Leadership in Disability at Georgia State University, has designed a brief survey to prompt your ideas about how technology is utilized for social

connectedness and the barriers to using them. Your outlook and experiences will shape the research we are doing here at the Center for Leadership in Disability.

Please click on the link to take the survey:

https://gsu.qualtrics.com/jfe/form/SV_6GpeZzdmA2chIBT

This survey will take about 10 to 30 minutes to complete. Feel free to share the survey with people you know. This survey will be open until **July 12th**.

*This study has been approved by the Institutional Review Board at Georgia State University
IRB number: H20620*

IF YOU HAVEN'T ALREADY, TAKE AND SHARE THE LATEST SURVEY OF USER NEEDS!

The SUN is the Wireless RERC's cornerstone survey on wireless technology use by people with disabilities. This latest version has been updated in response to changes in technology. In addition to questions about cell phone and tablet use, this version of the SUN collects information about wearables, "smart" home technologies, and other next-generation wirelessly connected devices.



Your responses will:

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

If you have a disability, please consider taking this survey. If you know someone who has a disability, please send the survey to them.

Take the survey online at <http://bit.ly/wRERC-SUN2020>, or

Scan the QR Code to open the survey on your mobile device, or

Take the survey via phone, call 404-839-8741.

OTHER ITEMS OF INTEREST

GLOBAL ACCESSIBILITY AWARENESS DAY (GAAD) 2020 CELEBRATED VIRTUALLY

May 2020 — For the eighth annual Global Accessibility Awareness Day (GAAD), many companies and organizations adjusted to the pandemic and hosted their GAAD events virtually. This allowed the resources, information, and celebrations to reach a larger audience, and people in the disability community were able to connect with others across the world.

Based in India, accessibility advocate, Raghavendra Peri, hosted the first-ever virtual Hello A11Y conference. HelloA11Y is an accessibility awareness company that seeks to educate the Indian technology community on the importance of inclusion and access for people with disabilities. This year's event was comprised of six sessions on May 21st. Thomas Logan hosted a session that focused on considerations for inclusive social virtual reality. Subsequently, Dennis Lembree discussed Scalable Vector Graphics (SVG) icons and screen reader accessibility. The other speakers, Tanisha Sabherwal and Amy Carney, spoke on writing accessible-friendly CSS and web accessibility. Prem Nawaz Khan Maraikayar highlighted the challenges faced by people with disabilities in regard to automatic accessibility testing and then provided solutions to address these barriers. Finally, Ted Drake closed the virtual conference with a discussion of exploring inclusive artificial intelligence.

The Web Accessibility Initiative (WAI) published short videos to introduce web accessibility and provide evaluation resources. The videos discuss the following topics: Easy Checks — A First Review of Web Accessibility, Evaluation Tools, Conformance Evaluation including the Report Tool, and Involving Users in Web Accessibility. In celebration of GAAD, they also re-shared their free online course, Introduction to Web Accessibility. In the first two sections, the course covers what web accessibility is. The next five sections discuss people and digital technology. The course also covers business cases and benefits, principles, standards and checks, and getting started with accessibility. WAI self-paced four-week course requires approximately 4-5 hours of effort per week.

The tech company, Prakat Solutions, hosted and sponsored its annual GAAD event virtually this year. Prakat Solution's annual event aims to connect non-governmental organizations (NGOs), industry, and corporate entities to bring awareness to issues on digital inclusivity and accessibility. The GAAD 2020 event focuses on people with cognitive disabilities, aging-related issues, and positive experiences with digital technology. In a similar vein, for GAAD, Accessibility Unlocked hosted a gaming competition under the Access Jam project that grants participants thirty days to produce a game that addresses accessibility barriers or a game with tools that solves them. Access Jam will also provide individuals with disabilities the opportunity to record or write and share their stories. Though this competition has no winners, and the entries will not be ranked, some entries will be shared in Accessibility Unlocked' s digital media.

IBM also celebrated GAAD 2020 with the launch of an open-source Equal Access Toolkit. This toolkit was created to provide web designers with resources to create accessible websites and applications. In the toolkit, there are two components. The first component of the toolkit has phase-based guidelines (plan, design, develop, verify, and launch) for web designer teams. The second component of the toolkit has an Accessibility Checker that assesses various aspects of the website and pages for accessibility issues. Web designer teams can add the Accessibility Check as a browser extension in

Chrome and Firefox. Facebook also joined in on the GAAD celebration by making open-source projects, collectively called React Native, accessible to people with disabilities. The React Native open-source framework contains 579 active repositories, and now it is accessible for people with disabilities to utilize. Facebook also shared how to make social media posts that include infographics accessible. They included tips such as Simple Language (shorter sentences and sentence case) Hashtags (use Camel Case), Emoji (avoid creating them using text), color (ensure text is on a high-contrast background), and many more tips.

Microsoft hosted its 10th annual Ability Summit on May 27th - May 28th via virtual content that connected people with disabilities, allies, and accessibility professionals. The Microsoft Virtual Ability Summit stated that it sought to empower its participants to expand their knowledge base and skills around accessibility and inclusivity tools and resources offered with Microsoft products; gain deeper insights on turning diversity and inclusion expertise into greater outcomes for your business; connect with experts to learn tips, tricks, and best practices for the tools you use every day; engage with Microsoft executives and notable members of the disability community and hear about exciting new projects and innovations; understand how to drive real digital transformation at a pace that works for the viewers, with a focus on the unique challenges facing everyone. The theme of the conference—Imagine, Build, Include, and Empower—accomplished the Ability Summit's mission statement.

The 2020 theme Imagine, Build, Include, and Empower the future of disability inclusion, and accessibility is embedded into the session tracks which focus on "(I) innovating new technologies, leveraging AI, Assistive technology and Inclusive Design; (B) making accessibility easier to achieve through tools, best practices, and knowledge sharing; (I) growing the base of talent with disabilities in the workplace to bring expertise to life in our culture; (E) telling the accessibility story effectively and connecting it to Microsoft's mission of empowering every person and organization on the planet to achieve more."

The Breakout Sessions were structured using the theme Imagine, Build, Include, Empower. Under the Imagine sessions, the following topics were discussed: Citizen Developers & Disability, Innovation & Accessibility: A Race with No Finish Line, Our Responsibility: Disability, Bias, and AI. The Build sessions covered Welcome to the Workplace: Explore How Inclusive Technologies Empower Employees, Inclusion — By Design, Inclusion — a Design Priority or an Engineering Overhead, Shift Left: Web Accessibility for Developers. The Include sessions discussed Making Your Classroom More Accessible and Inclusive and Mental Health & Using Technology to Create a Culture of Emotional Inclusion. Last but not least, the Empower sessions! In these talks, the following subject matter was covered: Telling Our Story: Authentic Representation of Disability on the Screen and Beyond and Marketers and Sellers: How to Activate Accessibility in Your Daily Job. All sessions were recorded and

are available via the Teams platform. Microsoft was thoughtful in its content and ensured that captioning and ASL were embedded in all sessions, PowerPoint decks were posted prior to all events, transcripts of sessions, and a “Tips and Tricks” document was posted at aka.ms/AbilitySummit to share best practices for navigating the virtual platform.

In addition to the thought-provoking content, the Ability Summit also hosted musical guest performances, including Mandy Harvey and Amber Galloway Gallego, a virtual Demo & Product Fair, Non-governmental organizations (NGO) Fair, and a Career Corner. To access the content and resources from the Ability Summit, check out the “Additional Information” links at the end of this story.

The UK’s Government Digital Services (GDS) is an office within the Cabinet that helps the public navigate government digital resources. In GDS’ mission to assist all of the UK’s citizens, GDS regularly assists people with disabilities to utilize digital services, which includes testing assistive technology, using persona profiles to simulate different users, and providing subtitles for films. Because accessibility is such an important aspect of the work GDS does, they celebrated Global Accessibility Awareness Day (GAAD) on May 21, 2020, with a day full of virtual activities. The following webinars were available to the public:

- An Introduction to Digital Accessibility Regulations
- How to avoid common accessibility statement fails
- How to carry out basic accessibility checks
- Building digital services that work for everyone
- Making accessibility accessible: the secret to engaging your workforce
- What would Marie Kondo do? How to clear your website of inaccessible PDFs

The GDS encourages everyone to raise awareness about accessibility and to assist with spreading the word, they have provided a downloadable resources pack to help deliver training sessions for your organization [Sources: Richard Morton and Rianna Fry via Gov.UK; Microsoft via Sway; David Cohen via AdWeek; NewzHook; HelloA11y!; Shadi Abou Zahra via W3C; Dalrada Financial Corp via 69News; James Batchelor via GamesIndustry.Biz; Maika Möbus via Jaxenter].

ADDITIONAL INFORMATION:

[Ability Summit 2020](#)

<https://sway.office.com/CJt2kqkQ5u0UI6qF>

[Hello A11Y News Item](#)

<https://newzhook.com/storNy/first-ever-hello-a11y-virtual-event-on-21-may-get-the-details-here/>

[Hello A11Y Event](#)

<https://www.helloa11y.com>

Free Online Course "Introduction to Web Accessibility"

<https://www.w3.org/blog/2019/12/free-online-course-introduction-to-web-accessibility/>

New Videos Introduce Web Accessibility - Great for GAAD

<https://www.w3.org/WAI/news/2020-05-14/eval-videos-gaad/>

Dalrada's Technology Company, Prakat Solutions, Hosts GAAD 2020

https://www.wfmz.com/news/pr_newswire/pr_newswire_technology/dalradas-technology-company-prakat-solutions-hosts-gaad-2020/article_7ee52501-6151-5bee-b7e3-2b870cca37fb.html

AccessJam announced to support Global Accessibility Awareness Day

<https://www.gamesindustry.biz/articles/2020-05-14-accessjam-announced-to-support-global-accessibility-awareness-day>

New IBM Equal Access Toolkit integrates accessibility into your development workflow

<https://jaxenter.com/ibm-equal-access-toolkit-172114.html>

Facebook Makes Its React Native Open-Source Framework Fully Accessible

<https://www.adweek.com/digital/facebook-makes-its-react-native-open-source-framework-fully-accessible/>

Celebrate Global Accessibility Awareness Day with GDS

<https://gds.blog.gov.uk/2020/05/07/celebrate-global-accessibility-awareness-day-with-gds/>

E-GLASSES TRACKS BODILY FUNCTIONS

May 27, 2020 — Wireless electronic glasses developed by Associate Professor Suk-Won Hwang at Korea University's KU-KIST Graduate School of Converging Science, referred to as "e-glasses," can track brain activity, eye movements, and other bodily functions. The e-glasses have a 3D-printed frame with electrodes embedded in the earpiece and eyepiece sections of the glasses. The electrodes near the wearer's ears act as an electroencephalogram (EEG), which tracks electrical activity in the brain, whereas the electrodes near the wearer's eyes monitor eye movements. The eye-movement function enables hands-free control of external devices, such as a gaming console, which has obvious implications for people with limited use of their upper body and limbs. The e-glasses also have an accelerometer on the side of one earpiece arm, which can track the user's body position and posture and detect abnormalities. The sensor data is wirelessly downloaded from the glasses for assessment. The prototype is not yet commercially available, and modifications continue. [Source: Ben Coxworth via NewsAtlas]

ADDITIONAL INFORMATION:

Multi-function e-glasses track the brain, eyes and more

<https://newatlas.com/wearables/multi-function-e-glasses/>

DISABILITY ADVOCATES URGE FOR IMPROVED COVID TRACKER IN NEW ZEALAND

May 26, 2020 — New Zealand's COVID Tracker app was released in May. This app's purpose is COVID contact tracing and creates a digital diary of the places users visit. In theory, a user should be able to scan a QR code poster located at an establishment to add it to their "diary," but only 13,600 businesses have subscribed to the service. That uptake rate is less than 3% of the country's 540,000 businesses and 380,000 people who've downloaded the app. However, disability advocates argue that there is poor accessibility. The app's QR Code poster lacks functionality for people with low vision. One user with a vision disability described his experience, stating that "there was no indication that [the app] actually worked." After scanning, no visual or audio cue said, "thank you for signing in." Many apps that use similar scanning techniques offer camera-spotting and autocues or vibrations to guide those with a visual disability in locating the object to be scanned. Many New Zealanders in the disability community have expressed frustration as it is a government app and should be completely accessible. Now the administration is being questioned as to whether they followed digital accessibility standards and guidelines. There are several other contact tracing apps in New Zealand, and many people with disabilities are opting to use those as the government assesses their version. According to the chair of the lobby group, Access Alliance Chrissie Cowan, this instance highlights the need to make digital standards and guidelines enforceable through legislation. [Source: Phil Pennington via RNZ]

ADDITIONAL INFORMATION:

[Covid-19 tracing app 'unusable' for blind and those with low vision](#)

<https://www.rnz.co.nz/news/national/417526/covid-19-tracing-app-unusable-for-blind-and-those-with-low-vision>

GOOGLE RELEASES NEW ANDROID FEATURE TO INCREASE ACCESSIBILITY

May 23, 2020 — Google released "Action Blocks" as an Android feature for people with limited mobility. The Action Block feature enables customization of home screen buttons from Google Assistant commands. For instance, if a user with limited mobility typically asks their Google Assistant to "adjust the volume," then they can turn this command into a shortcut on the home screen. To activate, Android users must download the Action Blocks app and pick an image for the command from either their camera roll or photo gallery. Then the user can place this on their home screen for one-touch access. [Source: Tech Shorts via The NEWS Minute]

ADDITIONAL INFORMATION:

[Google launches new Android accessibility tools, apps for people with disabilities](#)

<https://www.thenewsminute.com/article/google-launches-new-android-accessibility-tools-apps-people-disabilities-125134>

GOOGLE HELPS USERS ASSESS ACCESSIBILITY PRIOR TO LEAVING THEIR HOMES

May 21, 2020 — Google recently rolled out a new feature called Accessible Places on the Maps app. This feature allows individuals with physical disabilities to see if a location can accommodate their needs before arriving. To activate this feature, Android and iOS users should update their Maps app and switch the “Accessible Places” feature on in the accessibility section of the app’s setting menu. After turning on the Accessible Places feature, a wheelchair icon will appear for places that have an accessible entrance. Accessible Places also provides other related information about the establishment, such as if it has accessible seating, washrooms, or parking. For places that do not have accessible entrances, this feature will also explicitly indicate that information. The feature is now available to users in the US, Australia, Japan, and the UK. Google intends to roll out this feature in other countries subsequently. [Source: Igor Bonifac via Engadget]

ADDITIONAL INFORMATION:

[Google Maps will highlight accessible locations with a wheelchair icon](#)

<https://www.engadget.com/google-maps-accessible-places-update-163009394.html>

TRANSPORTATION PROJECT TAKES OFF WITH LEADERSHIP FROM THE DISABILITY COMMUNITY

May 21, 2020 — The European Union (EU) recently funded the TRIPS project that seeks to create a collaborative approach to developing accessible environments. The TRIPS project allows people with disabilities to take a leading role in designing accessible and useable transport systems. The Association for the Advancement of Assistive Technology in Europe (AAATE) and the European Network on Independent Living (ENIL) partnered in hosting the TRIPS initiative. Specifically, the role of ENIL is to bring the lived experiences of people with disabilities to the TRIPS project to ensure that existent transport barriers are addressed. The TRIPS project provides case studies that give tangible data on how co-designed mobility solutions ensure an inclusive urban transport system that is accessible for all. The case study cities under review include Bologna, Brussels, Cagliari, Lisbon, Sofia, Stockholm, and Zagreb. The AAATE and ENIL assert that for true inclusive transportation to occur, cities must change the perception of disabilities in society to seeing people with disabilities as “full citizens with equal rights to access all services.” [Source: AAATE]

ADDITIONAL INFORMATION:

[A New Approach to Designing Transport Systems Free of Mobility Barriers – Interview with ENIL about the TRIPS project](#)

<https://aaate.net/2020/05/21/a-new-approach-to-designing-transport-systems-free-of-mobility-barriers-interview-with-enil-about-the-trips-project/>

OPEN ACCESS DATABASE FOR ACCESSIBLE TOYS

May 14, 2020 — HuskyADAPT, founded in 2017, is a startup company that focuses on developing accessible toys for children with disabilities. Molly Mollica, a bioengineering doctoral student, collaborated with doctoral students from a multitude of disciplines to establish HuskyADAPT. From this variety of perspectives emerged the core foundation of HuskyADAPT. This organization has a three-pronged approach to developing services for children with disabilities, which includes design, community engagement, and toy adaptation. In the first prong, design, HuskyADAPT partners with community co-designers to address accessibility problems. The second prong, community engagement, emphasizes the value of community in which HuskyADAPT hosts “design-a-thons” with local K-12 schools and industry experts. In the final prong, toy adaptation, engineers hone in on innovative techniques to create accessible toys for children with disabilities.

Since its inception, HuskyADAPT has also developed an open-source database for accessibility design entitled PNW Adapted Toy Library. This accessibility design domain allows any user to access accessibility designs for toys and to create their own to share with the database. Over the last three years, numerous organizations such as PROVAIL Therapy Center and the Taskar Center for Accessible Technology at the Paul G. Allen School for CS&E have contributed to the database and partnered with HuskyADAPT on several designs. To utilize the library database, users “checkout” a design on the HuskyADAPT similar to the way one would “check out” an online product. Mollica, the founder, asserts that continuity is the way forward to ensure accessibility for a larger portion of the population.

[Source: And Nguyen via TheDaily]

ADDITIONAL INFORMATION:

[HuskyADAPT develops toy adaptation for all children to play](#)

http://www.dailuw.com/science/article_951ee782-90e7-11ea-8962-db863ac082e8.html?utm_medium=social&utm_source=twitter&utm_campaign=user-share

TONGUE-CONTROLLED DEVICE CREATED TO ASSIST PEOPLE WITH DISABILITIES

May 12, 2020 — For many people with upper-body mobility disabilities, there is an inadequate number of devices for them to interact with computers and input interfaces. Inspired by the annual CSUN conference, computer science professor Li Liu and his research students developed an assistive technology that uses the swipe of a tongue to navigate a device. The mechanics behind the technology taps into the camera located on the laptop computer. The program created by Liu allows the camera’s imaging processing feature to hone in on the tongue movement and translate it into an

action such as opening an internet browser. As Liu and his research team perfect the mechanisms behind the technology, they hope to transition this assistive technology to mobile phones and interfaces. Relatedly, Liu also created a system-level service with Google and added the tongue movement service to the Android ecosystem for public use. This assistive technology holds great potential to further assist people with upper-body mobility disabilities in accessing digital resources. [Victor Hugo Rojas via CSUN Today]

ADDITIONAL INFORMATION:

[With the Swipe of a Tongue, CSUN Prof Makes Touchscreen Capabilities Accessible to Those Without Use of Their Arms](https://csunshinetoday.csun.edu/education/with-the-swipe-of-a-tongue-csun-prof-makes-touchscreen-capabilities-accessible-to-those-without-use-of-their-arms/)

<https://csunshinetoday.csun.edu/education/with-the-swipe-of-a-tongue-csun-prof-makes-touchscreen-capabilities-accessible-to-those-without-use-of-their-arms/>

GAMING CHARITY CREATES DEVICES AND SOFTWARE TO IMPROVE ACCESSIBILITY

May 12, 2020 — The UK-based gaming charity, Special Effect, has become increasingly influential within the last five years. The charity seeks to ensure access to video games for people with disabilities. Initially, Special Effect focused its efforts on collaborating with software development companies to expand gaming inclusion for companies such as EA, Playground Games, DoubleFine, Xbox Adaptive Controller, Logitech Adaptive Gaming, and Rare. Now, Special Effect also develops numerous projects aimed at enabling people with mobility disabilities to play video games. One such project, EyeMine, utilizes eye-tracking software for Minecraft. Another project produced by Special Effect includes Eye Gaze Games. Special Effect partnered with Sun & Moon Games to create a browser-based chess game that allows people with mobility disabilities to play against anyone, anywhere. The technology utilizes eye movements to move the chess pieces on the board.

Special Effect's mission is furthered through its outreach program. They provide lifelong support, face to face consultations, and advise on adaptive gaming systems. The Special Effect strategy to access is three-pronged: gaming inclusion, individual assistance, and digital best practices. For the third prong in Special Effect's strategy, they operate a blog entitled Game Access, which houses extensive guidance for gamers with mobility disabilities on accessibility options.

However, Special Effect was hard-hit by the global pandemic in terms of exposure. Typically, as a nonprofit, Special Effect does its marketing via industry events such as GDC, EGX Rezzed, Insomnia, etc., but as many of these events were canceled, Special Effect has gotten creative. They are now hosting regular Twitch Streams and virtual events. They have even hosted a virtual version of the London 10K to raise funds. Notwithstanding this global pandemic, Special Effect is conducting important accessibility work. [Source: Rachel Watts via PC Gamer]

ADDITIONAL INFORMATION:

[SpecialEffect is helping people with physical disabilities play the games they love](#)

<https://www.pcgamer.com/amp/specialeffect-is-helping-people-with-physical-disabilities-play-the-games-they-love/#click=https://t.co/LEKAFdT3e8>

SUCCESSFULLY INTEGRATING ARTIFICIAL INTELLIGENCE IN BUSINESS MODELS

May 12, 2020 — Artificial Intelligence, once a concept associated with a futuristic society reliant on robots and technology, is now deeply embedded into the fabric of the 21st century. The future has arrived. However, companies', across a range of industries, application of artificial intelligence (AI) has yielded a variety of results in their business models. Wharton professor, Kartik Hosanagar, provides five strategies for organizations to successfully integrate AI into their business models that allow companies to "innovate, compete, and excel." These five strategies include: view AI as a tool, not a goal, take a portfolio approach, reskill and invest in your talent, focus on the long term, address AI-specific risks and biases aggressively. The first strategy, view AI as a tool, not a goal, emphasizes the importance of assessing existing industry challenges and determining where AI could be effectively used to address these problems.

The second strategy, take a portfolio approach, encourages companies to spread AI resources across a variety of short-term and long-term projects as opposed to one large project. Hosanagar argues that "the skills needed for embarking on AI projects are unlikely to exist in sufficient numbers in most companies, making reskilling particularly important." This argument succinctly illustrates the third strategy, resell, and invest in your talent, in which Hosanagar recommends that companies should be intentional in their hiring practices. Companies, according to Hosanagar, should focus on growing their talent base with individuals who have computer science training so that AI is incorporated in a meaningful way. Businesses aiming to integrate technology successfully should also consider the fourth strategy, focus on the long term, that encourages businesses to acknowledge that early failures with AI is inevitable and should not discourage companies from continuing to invest in AI.

The final strategy provided by Hosanagar requires companies to address AI-specific risks and biases aggressively. In doing so, companies can anticipate how to fix these potentially negative impacts on society and the business. Considering all of the potential downfalls of AI, Hosanagar reminds industries that "AI shouldn't be abandoned given that the alternative, human decision-makers, are biased too. Rather, companies should be aware of the kinds of social harms that can result from AI technologies and rigorously audit their algorithms to catch biases before they negatively impact society." As the Wireless RERC critically assess wireless technology, including AI, Hosanagar's final thoughts are most important for forward-thinking businesses as they must consider the importance

of inclusion and the possibility for discrimination through the use of AI technology. The mission to successfully integrate AI may not be an easy one; however, when companies embark on this journey with inclusion and accessibility in mind, they reduce bias risk and ensure the longevity of AI integration. [Source: Wharton School of Business]

ADDITIONAL INFORMATION:

[Five Strategies for Putting AI at the Center of Digital Transformation](#)

<https://knowledge.wharton.upenn.edu/article/five-strategies-putting-ai-center-digital-transformation/>

WEARABLE BELT ALLOWS USER TO FEEL TOUCH FROM DEVICES

May 11, 2020 — A German startup company recently released the Feelbelt, which amplifies or adds the sense of touch to any medium that outputs sound such as games, music, movies, Bluetooth, or Wi-Fi. The Feelbelt is worn around the waist and contains generators that produce impulses around the waist of the user. The Feelbelt has 10 of these impulse generators which vibrate in sync with music or sound. The wearable is also able to mimic frequencies from 1 Hz up to 20,000 Hz. Some devices, such as video games, contain surround sound, and the Feelbelt can also recreate that. For instance, if you are playing a game and an earthquake happens, you will feel the vibrations around you. With a six-hour battery life that recharges via USB-C, the German startup suggests that it could be a way for people with hearing disabilities to experience sound in a more immersive way. The device does have more range than most haptic feedback wearables and appears to be a more powerful version of what has been previously released. Currently, the startup is seeking funds for the Feelbelt on Kickstarter. If they receive enough funds, the Feelbelt could start shipping in September. [Source: Michael Irving via NewAtlas]

ADDITIONAL INFORMATION:

[The Feelbelt adds surround haptic feedback to music, movies, and games](#)

<https://newatlas.com/wearables/feelbelt-haptic-feedback-music-movies-games/>

APPLE HIGHLIGHTS ACCESSIBILITY TECHNOLOGY IN RECOGNITION OF GAAD

May 7, 2020 — In recent data analyses, Apple found that despite having numerous resources, apps, and supports for people with disabilities, many did not know they existed. Thus, in anticipation of Global Accessibility Awareness Day (GAAD), Apple highlighted its accessibility technology and resources to assist people with disabilities. These highlighted apps and resources went live in Apple App's Store on May 14th and included information on the Apple Care support team for people with disabilities, thoughtfully curated apps to assist with routine tasks, and Apple's educational

technology. The dedicated Apple Support Team for people with disabilities is available 24/7 in two languages (English and Mandarin). Customers with disabilities can reach the Apple Support Team by phone at [877-204-3930](tel:877-204-3930), online, chat, and through the contact section of the Apple Support app. The curated collection of apps in the Apple app store includes Speech Blurbs, Voice Dream, Roger Voice, and The ASL App. Apple also provided a collection of films and shows on Apple TV that feature actors with disabilities such as Zach Gottsagen from the "Peanut Butter Falcon." In light of COVID-19 and GAAD, Apple is providing resources to students with disabilities who are associated with programs like the Council of Schools & Services for the Blind. To learn more about how Apple celebrated GAAD, check out the information below. [Source: Shara Tibken via CNET]

ADDITIONAL INFORMATION:

[Apple promotes accessibility tech with dedicated Apple Care team, app curation](https://www.cnet.com/news/apple-promotes-accessibility-tech-with-dedicated-apple-care-team-app-curation/)

<https://www.cnet.com/news/apple-promotes-accessibility-tech-with-dedicated-apple-care-team-app-curation/>

COLORADO STATE UNIVERSITY LEADS THE WAY WITH ACCESSIBLE REMOTE LEARNING

May 6, 2020 — Some higher education institutions were far more prepared to provide support for students as they transitioned to remote learning. Colorado State University (CSU) was one of these universities. The Assistive Technology Resource Center (ATRC) at CSU was there to assist students with disabilities' transition to digital platforms. The ATRC provided assessments and training on assistive technology to those students who needed it. The ATRC also customized solutions for students, such as giving them different options for software for color-blindness impairment or providing students with smartpens, speech recognition software, and digital note-taking apps. As there have been numerous challenges in higher education institutions moving to digital platforms, many schools could learn from CSU's proactive preparedness by having an existing office to address assistive technology concerns. This solution further highlights the importance of accessibility being integral to the conversation and not an afterthought. [Jeff Dodge via Colorado State University]

ADDITIONAL INFORMATION:

[Center retools to find accessible solutions for remote learning](https://source.colostate.edu/center-retools-to-find-accessible-solutions-for-remote-learning/)

<https://source.colostate.edu/center-retools-to-find-accessible-solutions-for-remote-learning/>

EXPERTS WEIGH-IN ON ETHICAL DESIGNS OF ACCESSIBILITY FRAMEWORKS

May 5, 2020 — As the global pandemic necessitated that the workforce operates virtually, disability advocates highlight that accessible and flexible work policies could have been established for people with disabilities who required these modifications. With the expectation of COVID-19 socioecological

consequences having a lasting impact, career possibilities for people with disabilities who require more accessible work environments could be impacted positively, with workplace inclusion and accessibility being an undeniable issue that needs addressing. Notwithstanding this possibility, some disability advocates worry that employers will begin to justify an inaccessible workplace with “well you can just telework.” Dr. Boger, who is the Schlegel Chair in Technology for Independent Living at the charitable foundation Research Institute for Aging, notes that what works for one person may not work for another. Thus this is where the idea of ethics by design is introduced. Dr. Boger raises a key question for disability advocates and academics to consider: “How do we bake ethics and responsible design into the process, rather than as an afterthought?” In a report entitled “Ethical by Design,” Boger et al. (2017) developed guidance for advocates who construct ethical principles for the design and implementation of technology-based products and services. Since the pandemic, these authors are revising the manifesto to account for the reality that there is no clear approach across disciplines. Other scholars, institutions, and companies have considered how to work towards a more accessible work environment, and as the pandemic begins to set a “new normal,” there is an opportunity to have a dialogue about how to retool existing structures. [Source: SWE Magazine]

ADDITIONAL INFORMATION:

[Toward More Accessible Work Environments](#)

<https://alltogether.swe.org/2020/05/toward-more-accessible-work-environments/>

VOTING ALTERNATIVES IN RESPONSE TO COVID-19 SPURS CONVERSATION ON ACCESS

May 5, 2020 — As COVID-19 quickly spread across the country as a highly infectious disease during an election year, the need for alternative voting methods to in-person voting arose. States like West Virginia, Texas, California, and Michigan have all allowed voters to submit ballots by mail. Recently, however, Michigan was sued because the absentee voter system only consists of inaccessible paper ballots. Michigan quickly implemented a resolve. Voters with disabilities would be allowed to vote via an electronic absentee ballot, which is typically reserved for military personnel and other overseas voters. The electronic absentee ballot would allow voters with vision disabilities to utilize screen readers to cast their vote securely. The caveat to this concession is that people with disabilities must have filled out a special application by 4 pm on May 5th to get an electronic ballot and vote in the special Michigan election.

One advocacy group, Vote for Access, commented on this new transition to absentee ballot voting. Vote for Access’s primary aim is to evaluate and address barriers that prevent people with disabilities from voting, which they assert evolves into widespread voter suppression for an already marginalized group. This is a long-standing issue that the disability community has continually challenged. In

2017, the Government Accountability Office noted that, nationally, only 17% of polling places were fully accessible to people with disabilities. But Vote for Access argues that even this figure is generous because it does not consider that transportation options for people with disabilities are often limited or even nonexistent sometimes. As Vote for Access advocates continue to work for expanded access to basic civil rights, such as electronic ballot casting, some cybersecurity experts raise concerns about election hacking. But voting rights groups counter this with data that shows the United States voting infrastructure is already vulnerable and largely inadequate. [Mike Ludwig via Truthout]

ADDITIONAL INFORMATION:

[Mail-In Voting Must Be Made Accessible to Disabled Voters](#)

<https://truthout.org/articles/mail-in-voting-must-be-made-accessible-to-disabled-voters/>

TOUCH-SENSING WEARABLE SLEEVE DEVELOPED AT NCSU

May 1, 2020 — North Carolina State University's researchers and engineers recently developed a wireless touch sensing wearable sleeve that is breathable and makes for more comfortable long-term use. The sleeve can act as a touch-sensing controller for computer games like Tetris. The wearable device is also gas-permeable, ultra-thin, and has stretchable electrodes, which ensures the device does not cause skin irritation. The material, made of stretchable electrodes, is also electrically conductive and has "excellent stability in the presence of sweat and after long-term wear." The electrodes act as electrophysiological sensors. The published paper can be found in the ACS Nano journal, which is linked below. [Source: Paul Ridden via New Atlas]

ADDITIONAL INFORMATION:

[Breathable electronic material makes for more comfortable wearables](#)

<https://newatlas.com/wearables/breathable-electronic-material-sensor-zhu/?amp=true#click=https://t.co/cIYKZvaasB>

[Gas-Permeable, Ultrathin, Stretchable Epidermal Electronics with Porous Electrodes](#)

<https://pubs.acs.org/doi/abs/10.1021/acsnano.0c00906>

MIND-CONTROLLED BIONIC ARM DEVELOPED IN SWEDEN

May 1, 2020 — Variations of the bionic arm have been around for the last two decades; however, recent technological advances allowed an international team of scientists to create a bionic arm controlled by the mind. The prosthetic arm is comprised of a neuromusculoskeletal system that interfaces directly with the nerves and muscles of the arm joint. It is surgically attached to the individual's limb and anchored to the bone for stability. The surgery also requires electrodes to be attached to the muscles and nerves for the user to operate the hand and feel sensory feedback. This

attachment enables the user to exclusively use mind control to operate the hand. According to the participants in the study, the prosthesis feels so "lifelike" that training for the device was not necessary. As clinical trials and validations continue in Sweden, the international team of scientists hopes that this system will become available for widespread use across the world. [Micahel Irving via NewAtlas]

ADDITIONAL INFORMATION:

[Mind-controlled prosthetic arms "feel" like the real thing](#)

<https://newatlas.com/medical/mind-controlled-prosthetic-arm/>

ELECTRONIC ABSENTEE BALLOT TESTED IN DELAWARE

May 1, 2020 — Delaware is pilot testing electronic absentee ballots for the upcoming election for more than 700 overseas voters with disabilities. Delaware utilizes the Democracy Live system for electronic voting, which is then stored in an Amazon Web Services environment for processing. Delaware is the second state to pilot test internet or cloud-based voting. Cybersecurity experts have railed against this because they argue it is insecure. However, the State Election Commissioner, Anthony Albence, argued that Democracy Live has been in use for military personnel and overseas citizens in their state since 2010. This service later became available to people with disabilities in 2012, and they have not encountered any issues with security. Albence argues that the Democracy Live system is more convenient and secure than paper ballots or ballots via ballot machines. As Delaware continues to test the security of this system, they intend to hire an independent contractor to examine the primary election votes submitted via Democracy Live. These actions anticipate promising outcomes for improved voting access by people with disabilities. [Source: Sophia Schmidt via Delaware Public Media]

ADDITIONAL INFORMATION:

[Delaware piloting new internet-based voting system for disabled, overseas voters](#)

<https://www.delawarepublic.org/post/delaware-piloting-new-internet-based-voting-system-disabled-overseas-voters>

UPCOMING EVENTS

2020 M-ENABLING SUMMIT

The M-Enabling Summit will convene from September 14 to 16, 2020, in Washington, D.C. Summit presenters will cover topics such as robotics, wearables, virtual and augmented reality, artificial intelligence, and IoT.

ADDITIONAL INFORMATION:

[M-Enabling Website](#)

<https://m-enabling.com/>

TECHNOLOGY AND DISABILITY POLICY HIGHLIGHTS, MAY 2020

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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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