



## TECHNOLOGY AND DISABILITY POLICY HIGHLIGHTS – MAY 2021

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### OVERVIEW

Throughout May, the world celebrated Global Accessibility Awareness Day (GAAD). The U.S. Access Board published a press release commemorating the progress of accessibility in the country. They acknowledged their accessibility and inclusion programming over the last few months leading up to GAAD. Individuals or companies looking to improve their accessibility practices can take one of GAAD's virtual training sessions and learn more about digital accessibility guidelines and standards. Across social media, the hashtags #GAAD2021 and #GAAD circulated, and a host of entities held events, speakers, and tech companies released a plethora of digital devices that center on accessibility. For instance, Google announced the computer mouse panning feature that makes screen content more visible and more accessible to engage with for people with visual disabilities.

In regulatory news, the Federal Communications Commission (FCC or Commission) released a Public Notice extending the deadline for stakeholders to submit commentary on whether rules implementing the Twenty-First Century Communications and Video Accessibility Act of 2010 (CVAA) need updating. Essentially, the Commission is open to hearing about new advanced communications accessibility priorities that have come about as a result of technological change and existing CVAA proceedings that need more rapid progression and resolution.

In Wireless RERC news, we submitted reply comments to the FCC in response to their Notice of Proposed Rulemaking and Notice of Inquiry in The Matter of Amendment of Part II of the Commission's Rules Regarding the Emergency Alert System and Wireless Emergency Alerts [**PS Docket No. 15-94; 15-91**]. In our reply comments, we indicated support for expanding the Presidential alert class to allow activation by FEMA. Regarding WEA accessibility, among other things, we recommended that the FCC bring academic research findings to bear on federal policy and regulations concerning the accessibility of the content of emergency messages, specifically as it relates to the use of plain language instead of jargon, abbreviations, and acronyms that diminish accessibility.

This issue also includes news about AskSARA AT Tool, Social Media, Remote Wireless Charging, Brain-to-Text, Eye-gaze Technology, Earswitch, Robotics, and more.

## REGULATORY ACTIVITIES

### NTIA REQUESTS COMMENTS ON UPDATES TO ANNUAL INTERNET USE SURVEY

May 25, 2021 — The National Telecommunications and Information Administration (NTIA) published a Public Notice [**OMB Control Number 0660-0021**] requesting feedback on 67 questions they anticipate adding to the November 2021 edition of the U.S. Census Bureau’s Current Population Survey (CPS). This survey is one of the NTIA’s long-standing questionnaires distributed to approximately 50,000 homes across the United States. It supplements the periodically administered Current Population Survey (CPS) that gauges national labor statistics and provides information on digital use. The survey assesses various topics about digital inclusion and other internet policy issues, including adopting different types of devices and access technology. It also evaluates barriers to maximizing the internet as a resource. The notice requests comments on or before July 26, 2021. [Source: NTIA]

#### ADDITIONAL INFORMATION:

[Public Notice](#)

<https://www.ntia.doc.gov/other-publication/2021/request-comments-ntias-draft-internet-use-survey>  
[November 2021 NTIA Internet Use Survey](#)

[Federal Register Notice -- Comment Request Internet Use Survey](#)

### FCC REQUESTS STAKEHOLDER INPUT ON COMPENSATION PLAN FOR VIDEO RELAY SERVICE

May 20, 2021 — The FCC recently published a Notice of Proposed Rulemaking (NPRM) [**CG Docket No.s 03-123 and 10-51**] requesting public comment on proposed updates to the Video Relay Service’s (VRS) compensation plan. The NPRM suggests continuing with a tiered compensation approach whereby the one per-minute rate applies to a provider’s initial quantity of monthly VRS minutes, up to a maximum amount. Providers who require additional quantities of monthly minutes receive them at a lower rate. The FCC seeks input on this current structure, the levels of the per-minute compensation, and the duration of the next compensation cycle. Per a recent Report & Order, this existing compensation plan lasts through December 31, 2021, or until a new plan is adopted. [Source: FCC]

#### ADDITIONAL INFORMATION:

[FCC Seeks Comment on Compensation Plan for Video Relay Service | Federal Communications Commission](#)

<https://www.fcc.gov/document/fcc-seeks-comment-compensation-plan-video-relay-service-0>

## **FCC EXTENDS CVAA COMMENTS DEADLINE**

May 18, 2021 — The FCC released an updated Public Notice extending the deadline for stakeholders to submit commentary on the Twenty-First Century Communications and Video Accessibility Act (CVAA). The new deadline for reply comments is July 6, 2021. In this request, the Commission is seeking input relating to updating rules implementing the CVAA, including, but not limited to, access to video programming, audio description, closed captioning of internet protocol (IP) delivered video programming, accessible emergency information, and accessible user interfaces. Moreover, the Commission encourages comments on rules regarding access to interconnected voice over IP (VoIP), non-interconnected VoIP services, electronic messaging services, interoperable video conferencing services), the National Deaf-Blind Equipment Distribution Program, and accessible internet browsers on mobile phones. [Source: FCC]

### **ADDITIONAL INFORMATION:**

[FCC Extends Comment Periods for CVAA Accessibility Updates](#)

<https://www.fcc.gov/fcc-extends-comment-periods-cvaa-accessibility-updates>

## **WIRELESS RERC NEWS**

### **WIRELESS RERC ON THE RECORD: SUPPORTING FEDERAL LEVEL WEA ALERTS & IMPROVED ACCESSIBILITY**

May 2021 — The Wireless RERC submitted reply comments to the FCC in response to their Notice of Proposed Rulemaking and Notice of Inquiry in The Matter of Amendment of Part II of the Commission's Rules Regarding the Emergency Alert System and Wireless Emergency Alerts [**PS Docket No. 15-94; 15-91**]. In our reply comments, we indicated support for expanding the Presidential alert class to allow activation by FEMA. By expanding the alert class, agencies responsible for detecting the threat have the authority to issue the alert. We also concurred with CTIA and NYCEM's recommendations to relabel the alerts "Federal" instead of "Presidential" or "National" because public perceptions of this label observed during the 2018 nationwide WEA test. We also agreed that the term presidential can, unfortunately, be inflammatory and may elicit responses contrary to the intention of the emergency message specifically (e.g., protective action) and the system entirely (i.e., public trust). A small qualitative study of Georgia Tech personnel in 2018 showed that mobile phone users mentioned a preference for receiving the WEA test without the title "Presidential Alert" and would like to have seen the notification titled along the lines of "National WEA Test." As asserted by CTIA, "the effectiveness of emergency alerting will be lost if people simply ignore or opt-out of receiving these critical messages."

Regarding WEA accessibility, among other things, we recommended that the FCC bring the academic research findings to bear on federal policy and regulations concerning the accessibility of emergency messages for people with disabilities. Specifically, as it relates to the use of plain language instead of jargon, abbreviations, and acronyms that diminish user-friendliness and accessibility as the receiver must be familiar with the terms to fully understand the message's meaning and the associated risk. Finally, the Wireless RERC supported previous recommendations to alert the public about new alert labels citing our survey results on the relationship between responsiveness to WEA messages and user's prior knowledge of WEA.

**ADDITIONAL INFORMATION:**

[wireless\\_erc\\_reply\\_comments\\_eas\\_and\\_wea\\_2021final.pdf](#)

## **OTHER ITEMS OF INTEREST**

### **MICROSOFT'S FIVE-YEAR ACCESSIBILITY PLEDGE**

May 2021 – Microsoft recently announced a commitment to create more opportunities for people with disabilities in the workforce and to engage with technology meaningfully. In the consumer-facing category, Microsoft is launching “accessible by design” features in Microsoft 365, including a new background checker that can help fix content accessibility issues across the core Office apps, including Outlook. Additionally, by utilizing artificial intelligence, Microsoft is hoping to automate accessibility. For example, in Microsoft Word, AI will detect and convert to heading styles for readers who are blind or low vision. Meanwhile, Excel is getting a new navigation pane designed for screen readers to help discover objects in spreadsheets. In keeping with the focus on comprehension, Microsoft is also expanding Immersive Reader (initially designed for people with dyslexia and dysgraphia) to PowerPoint slides and notes. Microsoft also plans changes to LinkedIn, which is launching auto-captioning for live broadcasts, captions for enterprise content, and dark mode later this year. Lastly, Microsoft is adding the ability to use high-contrast mode in Teams to access shared content. According to Microsoft, this will help reduce eye strain and accommodate light sensitivity.

Microsoft is also expanding inclusive educational initiatives for students. For example, the company is releasing Reflect in Microsoft Teams, which offers support for social learning to help students with their emotional vocabulary. A Microsoft Reading Progress app is also in the pipeline to help teachers digitally test for reading fluency over time. They also contribute to building capacity for accessibility savvy developers through “[Teach Access](#),” an industry collaboration to address the critical need to enhance students’ understanding of digital accessibility, to support a cultural shift across the tech sector that will help create new technologies with the needs of people with disabilities in mind.”

Internally, Microsoft pledges to continue inclusive hiring practices and expand its disability representation survey to 45 additional countries and 90 percent of its workforce. In October, the company revealed that 6.1 percent of its US employees self-identified as having a disability. In terms of data collection, Microsoft promises more partnerships with the disability and accessibility community worldwide, with details to be announced in the coming year. For example, the company previously joined forces with Team Gleason to create an open dataset of pictures of people with ALS, designed to help develop better tools for eye or facial control of devices.

Finally, in the retail space, Microsoft Stores announces ASL video call capability to connect customers who are deaf with dedicated technical and customer support staff. [Source: BNP News Team, BizNews Post]

#### **ADDITIONAL INFORMATION:**

[Doubling down on accessibility: Microsoft's next steps to expand accessibility in technology, the workforce and workplace](https://blogs.microsoft.com/blog/2021/04/28/doubling-down-on-accessibility-microsofts-next-steps-to-expand-accessibility-in-technology-the-workforce-and-workplace/)

<https://blogs.microsoft.com/blog/2021/04/28/doubling-down-on-accessibility-microsofts-next-steps-to-expand-accessibility-in-technology-the-workforce-and-workplace/>

#### **APPLE ANNOUNCES NEW ACCESSIBILITY FEATURES**

May 19, 2021 – In celebration of Global Accessibility Awareness Day, Apple announced the upcoming launch of accessibility features for various products and services designed for people with mobility, vision, hearing, and cognitive disabilities.

To support neurodiversity, Apple is adding a Background Sounds feature designed to minimize distractions to help users focus or rest. Balanced, bright, dark noise sounds are available, and ocean, rain, and stream sounds. Apple will also launch AssistiveTouch for the Apple Watch later this year for users with limited mobility. Assistive Touch will enable the use of the watch without touching the display controls. Built-in motion sensors, the optical heart rate sensor, and on-device machine learning will let Apple Watch detect subtle differences in muscle movement and tendon activity that will control a cursor on the screen through hand gestures like a pinch or a clench. Additionally, later this year, iPad OS will support third-party eye-tracking devices for hands-free control.

Apple also announced SignTime and Memoji customizations. SignTime will allow customers to communicate with AppleCare and retail customer care using American Sign Language in the United States, British Sign Language (BSL) in the UK, or French Sign Language (LSF) in France using a web browser. New memojis are also coming to represent better customers who use oxygen tubes, cochlear implants, and soft helmets. Apple has also made updates to VoiceOver with photos - users can explore more details about people, text, table data, and other objects within images. For example, voiceOver

can now describe a person's position along with other objects in images, and with Markup, users can add image descriptions to personalize their photos.

Next, Apple is introducing a slew of new features for hearing accessibility. They are adding support for bi-directional hearing aids and enabling hands-free phone and FaceTime conversations. Next-generation models from MFi partners are coming later this year. Headphone accommodations will also gain support for audiograms, allowing users to customize their audio after importing their hearing test results. They are adding the ability to replace physical buttons and switches on SwitchControl with mouth sounds -- such as a click, pop, or "ee" sound -- for users with atypical speech, nonverbal, and who have limited mobility.

Finally, display and text size will be customizable on a per-app basis for users with colorblindness or other vision disabilities. "At Apple, we've long felt that the world's best technology should respond to everyone's needs. Our teams work relentlessly to build accessibility into everything we make," said Sarah Herrlinger, Apple's senior director of Global Accessibility Policy and Initiatives. [Juli Clover, Mac Rumors]

#### ADDITIONAL INFORMATION:

[Apple Announces New Background Sounds, Apple Watch AssistiveTouch, and Eye-Tracking Accessibility Features](#)

<https://www.macrumors.com/2021/05/19/apple-new-accessibility-features/>

#### **DLF WEBINAR ON ASSISTIVE TECHNOLOGY**

May 17, 2021 – United Kingdom. The Disabled Living Foundation (DLF) announced a new webinar on Wednesday, 26th May, called "Reflections on person-centered advice about AT and its role in maximizing independence." The webinar explored DLF's popular AskSARA tool, a free guidance resource to help find low-cost, independent living aids, mobility devices, and adaptations. The webinar also included speakers from Newcastle City Council, Warwickshire County Council, and Newport City Council, who shared their experiences of using AskSARA. The DLF says the session benefits anyone already using AskSARA or considering using AskSARA for their visitors, residents, clients, or the public.

AskSARA is a free-to-use tool that produces impartial advice, written by occupational therapists, about suitable aids, and adaptations for over ninety daily living topics for older and disabled people. It links to over 10,000 products for everyday living listed in the DLF's Living Made Easy marketplace, many of which can be immediately purchased from online retailers and delivered to their door. [Source: Sarah Sarsby, THUIS Magazine, UK]

#### ADDITIONAL INFORMATION:

[DLF announces webinar about assistive tech and how it facilitates greater independence](#)

<https://thiis.co.uk/df-announces-webinar-about-assistive-tech-and-how-it-facilitates-greater-independence/>

## **A WINDOW INTO THE EXPERIENCE SOCIAL MEDIA**

May 15, 2021 – United Kingdom. Talking about alt text, Alex Man, a digital marketer and the Assistive Technology Officer for the Royal Society for Blind Children (RSBC), says, “It’s rare that companies will add a descriptive alt text versus an alt text they think Google would like. I’ve even been on websites that use keyword stuffing. They’ll have a graphic, and the alt text says, ‘Cheap, blah, blah, blah, blah. ‘Cheap’ is not a visually descriptive word, so why would you put cheap in there?” Alex was born with glaucoma, which damaged his optic nerve, impairing his sight from a very young age. As both a person who is blind and a digital marketer, Alex is well aware of how issues of accessibility – particularly alt text – can become distorted by other marketing priorities.

According to the Royal National Institute of Blind People, 93% of people who are legally blind have some residual sight. Whatever partial sight remains is therefore extremely valuable. “Prior to losing my sight, I was a very visual person. In a way, I still am, which is quite ironic,” says Chloe Tear, who was active on Instagram long before her vision began to deteriorate. Instagram has remained part of her content mix despite being an image-focused platform. “When posting to Instagram, I will go through my photos where I can zoom in and see which ones they are, saving them to a separate album or to my favorites. Then, when I’m going to post them, I’ve already done the editing and choosing in a more accessible way. I know the photos I’m putting up, rather than guessing from little thumbnail pictures.” Chloe is also active on Facebook and Twitter, preferring enlarged text rather than a screen reader.

Alex describes his vision disability as severe. Large text is not an option for him unless it is blown up “insanely large, and I mean one-word-taking-up-a-whole-monitor-screen large.” Being born with a visual disability means Alex has only ever experienced social media through assistive technology. “I use Instagram occasionally, but I use Facebook a lot more because there’s accompanying text. A lot of people post a picture on Instagram without any captions apart from some hashtags, and I don’t get much out of that.”

As adept as both Alex and Chloe are at using assistive technology, some visual content remains stubbornly invisible to them. For example, most PDFs combine the image and text within a document into a single layer. “That’s a flattened image,” says Chloe. Also inaccessible are music-only videos, common on TikTok, Instagram Reels, and YouTube. These videos rely on captions to convey a few nuggets of text-based information. This may be fine for users who prefer to watch videos with the audio off – but apart from the audio, they are inaccessible to people who are blind. Therefore, content creators are encouraged to consider whether a narration or dialogue would provide context for on-screen actions.

While assistive technology solutions often crop up, Chloe says, "It shouldn't be down to the technology to be smarter because then it becomes more expensive. It should be down to making the content accessible, so users get the same experience regardless of the assistive technology they use." [Source: Jonathan Crossfield, Business 2 Community]

ADDITIONAL INFORMATION:

[How Blind Users Experience Instagram](#)

<https://www.business2community.com/instagram/how-blind-users-experience-instagram-02405656>

## **REMOTE WIRELESS CHARGING**

May 13, 2021 – Motorola announced a partnership with *Guru Wireless* to bring remote wireless charging technology to its smartphones and eliminate the need for charging cables and pads. With this new technology, smartphones could be charged using radio waves that are sent via charging hubs. The technology can also be used to charge other devices, including phones and laptops. "GuRu's patented, miniature modules will enable devices to be powered at long range by precision power transfer. Motorola and GuRu will work together to match Motorola's rigorous requirements of quality, power efficiency, and safety," the company said in a statement.

Wireless charging would have a myriad of different benefits, including making charging easier for those whose accessibility settings or preferred features drain their phone's batteries more rapidly. However, it is speculated that the technology is nascent, and many smartphone brands have explored the possibility of wireless "over the air" charging, but nothing has been promising so far. Motorola and Guru may be poised to make the technology a reality finally. [Source: Ankita Chakravarti, India Today]

ADDITIONAL INFORMATION:

[Motorola smartphones to come with remote wireless charging technology](#)

[https://www.indiatoday.in/technology/news/story/motorola-smartphones-to-come-with-remote-wireless-charging-technology-1802184-2021-05-13?utm\\_source=twshare&utm\\_medium=socialicons&utm\\_campaign=shareurltracking](https://www.indiatoday.in/technology/news/story/motorola-smartphones-to-come-with-remote-wireless-charging-technology-1802184-2021-05-13?utm_source=twshare&utm_medium=socialicons&utm_campaign=shareurltracking)

## **BRAIN-TO-TEXT DEVICE TURNS IMAGINED HANDWRITING INTO WORDS**

May 12, 2021 – For the first time in brain-computer interface (BCI) history, an experimental device helped a man who is paralyzed type his handwritten letters into text with 95% accuracy. The man, who is paralyzed from the neck down, imagined holding a pen to a piece of paper. He then tried to write. Electrodes attached to his brain detected the brain signal. Researchers Krishna Shenoy and neurosurgeon Dr. Jaimie Henderson of Stanford University said they had the man imagine he was writing letters by hand while a computer monitors his brain activity. Eventually, the computer program learned to decode brain activity by associating each letter of the alphabet and symbols with the specific

electric activity. "We can determine if the letter you wrote is an A or a B or a C and then plop that up on the screen, and you're able to spell out words and sentences and so forth one letter at a time," Shenoy said. In this way, it enabled the man to produce 90 characters or 15 words per minute, similar to the average rate people his age compose a text message.

The team's previous system, "BrainGate2" let the man type by selecting letters with a thought-controlled cursor. By imagining handwriting, the man worked more than twice as fast. Shenoy said that it is surprising that the brain-to-text technology worked even long after his injury. Although so much time has passed where the man could not use his limbs, the device still picked up very active brain signals associated with writing. The experimental device yielded the fastest BCI typing speed achieved thus far. In contrast, existing assistive technology requires participants who are paralyzed to imagine moving their hand to move a computer cursor, producing 40 characters per minute at top speed. [Source: Margaret Davis, The Science Times]

#### ADDITIONAL INFORMATION:

[Brain-To-Text Technology Enables Paralyzed Man to Turn Imagined Handwriting into Words on a Screen](https://www.sciencetimes.com/articles/31154/20210512/brain-text-technology-enabled-paralyzed-man-turn-imagined-handwriting-words.htm#:~:text=Brain-computer%20interface%20%28BCI%29%20technology%20helped%20a%20quadriplegic%20man,c haracters%20%2815%20words%29%20per%20minute.%20The%20Science%20Times)

<https://www.sciencetimes.com/articles/31154/20210512/brain-text-technology-enabled-paralyzed-man-turn-imagined-handwriting-words.htm#:~:text=Brain-computer%20interface%20%28BCI%29%20technology%20helped%20a%20quadriplegic%20man,c haracters%20%2815%20words%29%20per%20minute.%20The%20Science%20Times>

#### **UNDP FUNDS ASSISTIVE TECH IN RWANDA FOR STUDENTS WITH DISABILITIES**

May 12, 2021 – In Rwanda, approximately 20 percent (87,900) of children between the ages of 5 and 18 live with disabilities. The United Nations Development Programme (UNDP), in partnership with the United Nations (UN) and Liquid Telecom, funded a smart learning technology project to facilitate access to quality education. As a result, smart boards were given to three Gatagara schools, bringing a new learning experience to 1,366 students, including 494 students with disabilities.

"Smartboards and the internet are giving access to visual and sound contents which are more adapted to students with special needs while also initiating them to the use of the internet and new technologies," said Maxwell Gomera, UNDP resident representative. Dr. Nelson Mbarushimana, Director General at Rwanda Education Board, also said, "We have a new unit for inclusive and special needs catering for students with disabilities." He hopes to continue to strengthen the infrastructure for inclusive learning in Rwanda. [Source: Lydia Atieno, The New Times]

#### ADDITIONAL INFORMATION:

[Leveraging technology to ease learning for students with disabilities](#)

<https://www.newtimes.co.rw/lifestyle/leveraging-technology-ease-learning-students-disabilities#.YJ7o3dmoa0E.twitter>

## **EYE MOVEMENT TECHNOLOGY ADVANCEMENTS STAND TO IMPROVE SMARTPHONE ACCESS**

May 10, 2021 — The Google AI Blog published the latest advancement in eye movement research to increase accessibility for people with disabilities. The research team, led by Valliapan and Kohlhoff, created a gaze model that uses a multilayer feed-forward convolutional neural network based on the MIT GazeCapture database. Each convolutional layer was paired with a pooling layer that led to an “output” layer that interacts with the person's device. The research team found that the smartphone gaze approach, described above, helped with reading comprehension as participants were spending more time reading relevant passages in the experiment. As the research continues, the researchers believe that this recent advancement in eye movement shows the potential of smartphone-based, ML-powered eye tracking. [Source: Google AI Blog]

### **ADDITIONAL INFORMATION:**

[Accelerating Eye Movement Research for Wellness and Accessibility](#)

[https://ai.googleblog.com/2021/05/accelerating-eye-movement-research-for.html?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed:+blogspot/gJZg+\(Google+AI+Blog\)&m=1](https://ai.googleblog.com/2021/05/accelerating-eye-movement-research-for.html?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed:+blogspot/gJZg+(Google+AI+Blog)&m=1)

## **ASSISTIVE TECH LETS USERS COMMUNICATE VIA EAR CLICKS**

May 6, 2021 – United Kingdom. Known as "Earswitch," new technology is being developed at Britain's University of Bath, designed for users who are described as "locked-in," i.e., they're paralyzed and nonverbal, such as with conditions like Motor Neurone Disease (MND). Dr. Nick Gompertz is developing the device in collaboration with researchers at the University of Bath. The prototype allows people to communicate by tensing a tiny muscle to operate an assistive keyboard, similar to the one used by Stephen Hawking. However, while for Stephen Hawking, communication relied on him tensing a muscle in his cheek, this new device uses a tiny, hidden muscle in the ear.

A computer-connected silicone earpiece containing a tiny camera and light is temporarily inserted into the ear canal. The camera then monitors the middle ear's tensor tympani muscle, which for some can be controlled voluntarily. This muscle is one of the smallest in the body and was once thought to help protect the eardrum from loud noise. According to Dr. Gompertz, the camera detects movement of the eardrum when the person intentionally tenses the middle ear muscle. This movement is detected by the computer and controls an on-screen keyboard. The keyboard scans sequentially through rows of letters, then groups of letters, allowing single letters to be selected by an “ear-click.” Dr. Gompertz adds that there is huge potential for Earswitch. Along with developing the device, the team wants to

research people's ability to control their tensor tympani muscle and whether it's possible to train people to do so.

**ADDITIONAL INFORMATION:**

[New technology could allow people with Motor Neurone Disease to communicate via computer](https://www.news-medical.net/news/20210506/New-technology-could-allow-people-with-Motor-Neurone-Disease-to-Communicate-via-computer.aspx)

<https://www.news-medical.net/news/20210506/New-technology-could-allow-people-with-Motor-Neurone-Disease-to-Communicate-via-computer.aspx>

## **ROBOTIC ARM DETANGLES HAIR**

May 5, 2021 – Nurses spend 18 to 40 percent of their time performing direct patient care tasks with little time to spare. Personal care robots that brush hair could reportedly provide substantial relief and reduce the time pressure on healthcare systems. In 2011, Panasonic created a robot that could wash, massage, and blow-dry hair to support “safe and comfortable living of the elderly and people with limited mobility, while reducing the burden of caregivers.” However, hair-combing bots were less researched, so scientists from MIT’s Computer Science and Artificial Intelligence Laboratory (CSAIL) and the Soft Math Lab at Harvard University developed “RoboWig.”

The device is a robotic arm equipped with a sensorized brush. The robot has a camera that helps it “see” and assess curliness to plan a gentle and efficient brush-out. The bot adapts to the degree of tangling in the hair and was tested by brushing wigs ranging from straight to very curly hair. This provided insight into the behaviors of the combing, related to the number of entanglements, and how those could be effectively brushed out by choosing appropriate brushing lengths. The team wants to perform more realistic experiments with human subjects eventually, to better understand the robot's performance concerning their experience of pain — a metric that is obviously highly subjective, as one person’s “two” could be another’s “eight.” [Source: Rachel Gordon, MIT News]

**ADDITIONAL INFORMATION:**

[A robot that can help you untangle your hair](https://news.mit.edu/2021/robot-can-help-you-untangle-your-hair-0505)

<https://news.mit.edu/2021/robot-can-help-you-untangle-your-hair-0505>

## **UPCOMING EVENTS**

### **NATIONAL DISABILITY RIGHTS NETWORK ANNUAL CONFERENCE**

The National Disability Rights Network (NDRN) will be hosting its annual conference virtually this year. This conference includes intensive training sessions, workshops, and networking opportunities. This year, the virtual conference will be hosted over three weeks: May 17-21, May 24 – 28, and **June 7-11, 2021**. There will be more than 115 sessions and institutes present throughout the duration of the

conference. The NDRN will still offer continuing education credits for many of its sessions. [Source: The National Disability Rights Network].

ADDITIONAL INFORMATION:

[NDRN Conference Page](#)

<https://www.ndrnevents.org/profile/web/index.cfm?PKwebID=0x44668fb0&varPage=home>

## **RESNA 2021 VIRTUAL CONFERENCE**

The RESNA 2021 Virtual Conference, taking place July 7 – 9, 2021, bringing together assistive technology professionals from various disciplines to interchange ideas about innovations and research helping people with disabilities lead independent and healthy lives. The content featured at the RESNA 2021 Virtual Conference drives innovation and research in the assistive technology community, and you can earn up to 3.6 IACET CEUs. In addition, registration grants access to a recorded version of each educational session, allowing more content to be experienced than in the in-person format. The virtual format will also allow direct contact with speakers and attendees and provide opportunities for connecting outside of the conference.

ADDITIONAL INFORMATION:

[RESNA 2021 Virtual Conference](#)

<https://www.resna.org/Events/Annual-Conference/Registration>

## **NATURAL HAZARDS RESEARCH WORKSHOP**

The Natural Hazards Center will virtually host the 2021 Natural Hazards Research and Application Workshop from July 11-14. This year marks the 46<sup>th</sup> annual workshop and will be organized around the theme, *The Hazards and Disaster Workforce: Preparing to Meet 21<sup>st</sup> Century Challenges*. This workshop will focus on how the existing workforce can help develop a demographically diverse and highly skilled future workforce. The annual Researchers Meeting will follow the annual workshop on July 14-15. Researchers and scholars who anticipate attending either the Natural Hazards Research and Application workshop or Researchers Meeting will soon be able to register, so save the dates.

ADDITIONAL INFORMATION:

[2021 Virtual Natural Hazards Workshop](#)

[https://hazards.colorado.edu/workshop/2021/save-the-dates?utm\\_source=NHC+Master+List&utm\\_campaign=043cdc8e66-CallforContributions\\_2019\\_COPY\\_02&utm\\_medium=email&utm\\_term=0\\_dabc309806-043cdc8e66-54424325](https://hazards.colorado.edu/workshop/2021/save-the-dates?utm_source=NHC+Master+List&utm_campaign=043cdc8e66-CallforContributions_2019_COPY_02&utm_medium=email&utm_term=0_dabc309806-043cdc8e66-54424325)

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