

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Implementation of Sections 716 and 717 of	)	CG Docket No. 10-213
the Communications Act of 1934, as Enacted	)	
by the Twenty-First Century Communications	)	
and Video Accessibility Act of 2010	)	

**PN COMMENTS OF CTIA—THE WIRELESS ASSOCIATION® –  
ACCESSIBILITY OF COMMUNICATIONS TECHNOLOGIES**

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**PN COMMENTS OF CTIA—THE WIRELESS ASSOCIATION® –  
ACCESSIBILITY OF COMMUNICATIONS TECHNOLOGIES**

CTIA-The Wireless Association® (“CTIA”) is pleased to submit these comments in response to the Public Notice issued by the Consumer and Governmental Affairs Bureau (“CGB” or “Bureau”) of the Federal Communications Commission (“Commission” or “FCC”) seeking comment from the public to inform the Commission’s preparation of the second biennial report required by the Twenty-First Century Communications and Video Accessibility Act of 2010 (“CVAA” or the “Act”).<sup>1/</sup> CTIA appreciates the opportunity to provide information to the FCC on the many ways the wireless industry continues to work to ensure that all consumers, including people with disabilities and older adults, can take advantage of innovative wireless products and services.

As detailed below, CTIA respectfully submits that the Commission should report to Congress that:

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<sup>1/</sup> See *Consumer and Governmental Affairs Bureau Seeks Comment on the Accessibility of Communications Technologies for the 2014 Biennial Report Required by the Twenty-First Century Communications and Video Accessibility Act*, Public Notice, CG Docket No. 10-213, DA 14-828 (rel. June 17, 2014) (“Public Notice”); *FCC Extends Deadline for Comment on the Accessibility of Communications Technologies for the 2014 Biennial Report Required by the Twenty-First Century Communications and Video Accessibility Act*, Public Notice, CG Docket No. 10-213, DA 14-847 (rel. June 19, 2014); see also *Twenty-First Century Communications and Video Accessibility Act*, Pub. L. No. 111-260, 47 U.S.C. § 618(b)(1) (2010).

- Since the last Biennial Report, the U.S. wireless industry has continued to lead the market in offering all consumers – including people with disabilities – a wide array of innovative and competitive wireless services and equipment. Consistent with the CVAA, wireless service providers, equipment manufacturers, and entities throughout the wireless ecosystem continue to develop and enhance wireless products and services to meet the needs of people with disabilities.
- Wireless service providers and equipment manufacturers continue to advance accessibility throughout the product design process, including through consultation with people with disabilities, and to ensure the accessibility of information and documentation relating to wireless products and services.
- The wireless industry has gone above and beyond the requirements of the CVAA and has fulfilled voluntary commitments to improve the accessibility of public safety communications and increase awareness of accessible wireless products and services.

CTIA member companies have long been committed to ensuring that people with disabilities can readily access wireless products and services, and they have maintained this commitment following implementation of the CVAA. The Commission and Congress can support and further the wireless industry’s ability to meet the needs of people with disabilities by making more spectrum available for wireless services and by maintaining a flexible and predictable “light touch” regulatory framework, which encourages competition, innovation, and collaboration among stakeholders.

## **INTRODUCTION AND SUMMARY**

As CTIA detailed in its comments for the 2012 CVAA Biennial Report, the U.S. wireless industry leads the world in offering all consumers – including those with disabilities – a wide

array of innovative and competitive wireless services and equipment.<sup>2/</sup> As wireless devices and services become essential tools to meet the personal, business, and emergency communications needs of all Americans, the wireless industry continues to provide products and services that help break down historic communications barriers for people with disabilities. Consistent with the CVAA, collaborative efforts among industry participants, consumers, and regulators have also led to innovations that provide choice and value in wireless products and services for people with disabilities.

Wireless service providers continue to offer a wide range of service plans that offer people with disabilities choice and value among voice, text, and data services. Wireless equipment manufacturers' commitment to achieving accessibility has led to the development of innovative feature phones, smartphones, and tablets with built-in accessibility solutions such as screen readers, captioning software, hearing aid compatibility ("HAC"), and, increasingly, personal assistant programs that ease everyday tasks and operations of mobile devices for people of different abilities. Opportunities to support accessibility are also being addressed throughout the wireless ecosystem, including ensuring compatibility with assistive technologies and developing innovative applications to meet the needs of people with disabilities.

The wireless industry has not only made significant efforts to comply with the letter, spirit, and intent of the CVAA, but has also undertaken voluntary collaborative efforts that have contributed to the widespread availability of, and information about, accessible wireless products and services. CTIA member companies have fulfilled voluntary commitments to support accessible wireless services for public safety, including Text-to-911 and wireless emergency alerts ("WEAs"). Moreover, the wireless industry continues to engage in and facilitate

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<sup>2/</sup> See PN Comments of CTIA-The Wireless Association–Accessibility of Communications Technologies, CG Docket No. 10-213 (filed July 25, 2012) ("CTIA 2012 Comments").

substantial voluntary outreach and educational efforts within the accessibility and older adult communities.

Through its Accessibility Outreach Initiative, CTIA facilitates an ongoing discussion among member companies and the accessibility community about the efforts to promote the development and awareness of accessible wireless technologies. CTIA also continues to manage and update AccessWireless.org – the “first stop” for people who are deaf, hard of hearing, blind, or visually, physically, cognitively, or speech impaired to obtain information about accessible wireless products and services – through collaboration and engagement with representatives and experts from the accessibility and older adult communities. All of these voluntary efforts evidence the strong commitment that CTIA and its member companies have to the accessibility community and providing a wide array of accessible wireless products and services.

One of the most important factors in the wireless industry’s ability to offer such a wide array of products and services to people with disabilities is the massive investment wireless providers have made in their networks. Last year alone, the wireless industry invested approximately \$34 billion in their networks, with nearly \$300 billion invested since 2001.<sup>3/</sup> These infrastructure improvements have resulted in the deployment of 4G LTE service across the U.S., accounting for almost half of the world’s 4G subscribers.<sup>4/</sup> Moreover, this massive capital investment has spurred competition and innovation throughout the mobile ecosystem, which has promoted the development of, among other things, devices and applications that are accessible to

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<sup>3/</sup> See CTIA–The Wireless Association Response to House White Paper on Competition Policy and Role of the FCC, at 1-2 (filed June 13, 2014) (“CTIA Competition Policy Comments”), *available at* [http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/analysis/CommActUpdate/WP3\\_Responses\\_22-42.pdf](http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/analysis/CommActUpdate/WP3_Responses_22-42.pdf); CTIA–The Wireless Association Response to House White Paper on Modernizing U.S. Spectrum Policy, at 1-2 (filed Apr. 25, 2014) (“CTIA Spectrum Policy Comments”), *available at* [http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/analysis/CommActUpdate/WP2\\_Responses\\_14-25.pdf](http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/analysis/CommActUpdate/WP2_Responses_14-25.pdf).

<sup>4/</sup> See CTIA Competition Policy Comments at 3-4.

people with disabilities.<sup>5/</sup> As a result, people with disabilities and older adults can comparison shop across service providers to find the products and services that best meet their unique needs.<sup>6/</sup> The competitive wireless marketplace is also driving innovation and prompting service providers to constantly seek to offer a variety of wireless devices and services to benefit all American consumers, including people with disabilities.<sup>7/</sup>

As the wireless industry continues to take steps consistent with the CVAA, CTIA believes that the FCC should take several targeted measures that would improve the wireless industry's ability to comply fully with the CVAA's requirements. For example, the Commission should promptly resolve outstanding rulemakings and issues regarding accessibility, such as the meaning of the term "interoperable video conferencing," to provide needed regulatory certainty so that companies can plan and provide for compliance. The Commission also should update and streamline its HAC reporting requirements by updating its form (FCC Form 655) to make it more user-friendly (*e.g.*, by allowing users to cut and paste information, identifying errors with specificity, and providing entities with copies of previous reports to avoid duplicative efforts) and accelerate its review of the HAC reports. The Commission can also further ensure the success of the CVAA's flexible framework by clarifying that it will consider, when conducting an achievability analysis, that a covered entity does not always have ultimate control over whether a particular component supports an accessibility feature. Finally, the Commission should take steps to transition teletypewriter ("TTY") users to more efficient communication

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<sup>5/</sup> See *id.* at 5-6; CTIA Spectrum Policy Comments at 2-4.

<sup>6/</sup> See CTIA Competition Policy Comments at 6-7; see also Comments of CTIA–The Wireless Association, WT Docket No. 13-135, at 20-25 (filed June 17, 2013) ("CTIA Wireless Competition Comments"); Letter from Scott K. Bergmann, Vice President, Regulatory Affairs, CTIA–The Wireless Association, to Chairman Wheeler and Commissioners, FCC, GN Docket No. 09-51, WT Docket No. 13-135, at 2 (filed Nov. 13, 2013) ("CTIA Nov. 2013 *Ex Parte* Letter").

<sup>7/</sup> See, *e.g.*, CTIA Competition Policy Comments at 6-7.

means by removing the requirement to support TTY on wireless services, especially for wireless service providers that support Text-to-911 on a voluntary basis.

As part of the CVAA Biennial Report to Congress, the Commission should also emphasize that the foundations of the wireless industry’s successful efforts to address accessibility issues are 1) strong national policies that provide more spectrum for wireless services and enable the deployment of wireless infrastructure, and 2) a flexible and predictable “light touch” regulatory framework that encourages competition, innovation, and collaboration among stakeholders.<sup>8/</sup> Adhering to, and in some cases furthering, this approach will continue to facilitate the development of innovative wireless services and devices that significantly benefit the accessibility community.<sup>9/</sup>

#### **I. THE U.S. WIRELESS INDUSTRY IS A LEADER IN OFFERING ACCESSIBLE SERVICES AND EQUIPMENT**

Well before Congress passed the CVAA, wireless industry – including service providers, equipment manufacturers, and app developers – have worked to ensure that all consumers, including people with disabilities, can take advantage of innovative wireless products and services. The robust and competitive wireless ecosystem provides tremendous opportunities for people with disabilities. The examples provided below are by no means an exhaustive list of currently available accessible wireless services, products and applications, but rather are illustrations of the many ways the wireless industry is working to meet the communications needs of individuals with disabilities.

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<sup>8/</sup> *Id.* at 3-9.

<sup>9/</sup> *See id.* at 5 (citing CTIA Wireless Competition Comments at 3-37; CTIA Nov. 2013 *Ex Parte* Letter at 3; Simon Flannery, *Telecom Services, 2Q13 Tracker: Right Place, Right Time for Towers As Wireless Competition Rises*, MORGAN STANLEY RESEARCH, Aug. 27, 2013, at 1 (“2Q13 results made it clear that increasing US wireless competition is not a 2014 story; it’s happening now.”)).

**A. Wireless Service Providers Increasingly Offer A Wide Array Of Accessible Services And Plans And Incorporate Accessibility Into Their Business Plans.**

Wireless service providers continue to offer and expand their array of services that benefit the accessibility community, including by introducing voice, text, data, and service plans that greatly benefit people with disabilities and seniors.<sup>10/</sup> For example, the Sprint Relay Data Plan offers unlimited e-mail, Internet access, instant messaging, and domestic text and picture messaging.<sup>11/</sup> Sprint, T-Mobile, and other service providers have also begun providing HD Voice services, which offer crystal-clear voice calls with fuller, more natural-sounding voice, plus noise cancelling technology that is expected to benefit all consumers, including people who have hearing difficulties.<sup>12/</sup> AT&T offers the Text Accessibility Plan (“TAP”) that is uniquely designed for customers, such as the deaf, hard of hearing or speech impaired, who use mobile data services more intensively and also offers Text Accessibility Plans for iPhone® that include the ability to use Apple’s FaceTime over its 4G Network.<sup>13/</sup> In select areas, AT&T’s Senior Plan 200 provides voice services such as three-way calling, voicemail, call forwarding, and call waiting to seniors at a significantly reduced cost.<sup>14/</sup>

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<sup>10/</sup> See *Public Notice* ¶ 7.

<sup>11/</sup> Sprint Relay, <http://www.sprintrelay.com/> (last visited July 6, 2014).

<sup>12/</sup> Sprint, FAQs About HD Voice from Sprint, [http://support.sprint.com/support/article/FAQs\\_about\\_HD\\_Voice\\_from\\_Sprint/3b348589-81a4-452d-8758-cd47d7ddb952](http://support.sprint.com/support/article/FAQs_about_HD_Voice_from_Sprint/3b348589-81a4-452d-8758-cd47d7ddb952) (last visited July 6, 2014); T-Mobile, About HD Voice, <http://support.t-mobile.com/docs/DOC-5407> (last visited July 12, 2014).

<sup>13/</sup> AT&T, Text Accessibility Plan, [http://relayservices.att.com/content/225/Text\\_Accessibility\\_Plan\\_TAP.html](http://relayservices.att.com/content/225/Text_Accessibility_Plan_TAP.html) (last visited July 13, 2014); and AT&T, Text Accessibility Plans for iPhone®, <http://www.wireless.att.com/learn/articles-resources/disability-resources/text-accessibility-plan-for-iphone.jsp#tap> (last visited July 13, 2014).

<sup>14/</sup> Phone Dog, AT&T Senior Nation 200, <http://www.phonedog.com/carriers/at-t/plan/at-t-senior-nation-200/> (last visited July 6, 2014).

Verizon offers a Nationwide Messaging Plan<sup>15/</sup> designed for people who are deaf or hard of hearing and a Nationwide 65 Plus Plan available exclusively for seniors 65 and older. Both plans are available for feature phones and smartphones at a reasonable price.<sup>16/</sup> While U.S. Cellular’s Shared Connect Plans and No Contract plans have messaging options built-in, U.S. Cellular also offers messaging-only plans designed for those who want to use messaging as their primary way to communicate, including the deaf or hard of hearing.<sup>17/</sup>

In addition to creating service plans that meet the needs of people with disabilities, wireless providers offer numerous devices with a range of low-end and high-end features, functions, and prices that include accessible features for people with disabilities, as well as a variety of post- and pre-paid plans to accommodate differing abilities to pay.<sup>18/</sup> For example, T-Mobile’s HAC handset portfolio includes “premium” devices featuring high-end designs and sophisticated user interfaces and functionalities.<sup>19/</sup> U.S. Cellular offers a menu of HAC handset options, including an array of smartphones that are equipped with different operating systems and that come with numerous native accessibility features.<sup>20/</sup>

Service providers have also developed programs to consider accessibility throughout all stages of product and service design and deployment. For instance, AT&T has established a Corporate Accessible Technology Office (“CATO”), which offers a user-centric approach to

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<sup>15/</sup> Verizon Wireless, Nationwide Messaging Plan with No Voice Minutes, <http://www.verizonwireless.com/b2c/splash/messagingplans.jsp> (last visited July 6, 2014).

<sup>16/</sup> Verizon Wireless, Nationwide 65 Plus Plans, <http://www.verizonwireless.com/b2c/plan/nationwide-65-plus> (last visited July 6, 2014).

<sup>17/</sup> U.S. Cellular, Messaging-Only Plans, <http://www.uscellular.com/plans/text-only.html> (last visited July 6, 2014).

<sup>18/</sup> *See Public Notice* ¶ 7.

<sup>19/</sup> T-Mobile, Accessibility Policy, [http://www.t-mobile.com/Company/CompanyInfo.aspx?tp=Abt\\_Tab\\_ConsumerInfo&tsp=Abt\\_Sub\\_AccessibilityPolicy](http://www.t-mobile.com/Company/CompanyInfo.aspx?tp=Abt_Tab_ConsumerInfo&tsp=Abt_Sub_AccessibilityPolicy) (last visited July 6, 2014).

<sup>20/</sup> U.S. Cellular, Hearing Aid Compatibility, <http://www.uscellular.com/uscellular/services/hearing-aid.jsp> (last visited July 6, 2014).

ensuring that its products and services meet the communications needs of the accessibility community.<sup>21/</sup> CATO has created a series of guides and checklists, supported by accessibility subject matter experts, to assist product and service development teams. Verizon ensures that all of its new hires undergo online training courses covering accessibility requirements, and AT&T's CATO has developed training practices to improve how its employees think about the accessibility of products and services and how to interact with customers with disabilities.

**B. Wireless Equipment Manufacturers Continue To Develop Innovative Devices And Software That Include A Variety Of Accessible Features And Solutions.**

**1. Manufacturers continue to improve features and solutions for smartphones to meet the needs of people with varying abilities.**

Wireless equipment manufacturers continue to improve smartphone accessibility features and create solutions to meet the needs of people with disabilities. These new devices and technologies are available for purchase online and in retail stores at a variety of price points, are easily identifiable for those seeking such devices and features, and are operable by people with varying abilities, including those without vision, hearing, or speech, as well as those with limited vision, hearing, manual dexterity, or cognitive skills.<sup>22/</sup>

As manufacturers move to a platform-based approach, accessibility features are more consistently available on all of the device models that use a particular operating system, such as Apple's iOS, Google's Android, BlackBerry, and Microsoft's Windows Phone. The platform-based approach has two advantages. First, it ensures consumers can take advantage of accessibility features built into an operating system that is used by high-end or low-end devices. Second, the platform-based approach allows the manufacturer to distribute new features to any

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<sup>21/</sup> See, e.g., Letter from Christopher M. Heimann, General Attorney, AT&T Services, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 13-5 and GN Docket No. 12-353, at 5 (filed Mar. 25, 2014).

<sup>22/</sup> See *Public Notice* ¶ 7.

device that uses that platform via software updates, so consumers can choose to take advantage of new features without purchasing new equipment.

**a. Blind and low vision-related features**

The major platforms for smartphones offer a variety of features designed to meet the needs of the blind or people with low vision. For example, Apple's Voice Over screen reader works with all of iPhone's native applications, provides users with an audio description of everything happening onscreen, and offers a variety of customizable settings.<sup>23/</sup> Apple's iOS platform supports more than 40 refreshable Braille displays that work with Voice Over.<sup>24/</sup> In addition, devices operating Google's Android<sup>25/</sup> have a TalkBack Screen Reader built into the operating system which can now be enabled straight out of the box from the initial set-up screen using a simple gesture.<sup>26/</sup> Devices supporting Google's Android operating system also offer Explore by Touch, which reads icons and words as a user moves his or her finger across the screen,<sup>27/</sup> and BrailleBack, which helps make use of supported refreshable Braille displays via Bluetooth.<sup>28/</sup> BlackBerry also offers a number of accessibility features with the BlackBerry 10 operating system, including screen reader software, BlackBerry Magnify (which allows users to

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<sup>23/</sup> Apple, VoiceOver for iOS, <https://www.apple.com/accessibility/ios/voiceover/> (last visited July 6, 2014).

<sup>24/</sup> Apple, Braille Displays for iOS, <https://www.apple.com/accessibility/ios/braille-display.html> (last visited July 6, 2014). If a user does not see his or her device on the list of supported Braille devices, he or she may email to request that Apple include that device. Apple also provides user guides in Braille upon request.

<sup>25/</sup> A number of manufacturers offer devices with Android operating systems, including Samsung, HTC, Motorola, LG, Huawei, Sony, ZTE, and Kyocera. *See* Android, Phones and Tablets, <http://www.android.com/phones-and-tablets/> (last visited July 6, 2014).

<sup>26/</sup> Google, Enable TalkBack, [https://support.google.com/accessibility/android/answer/6007100?hl=en&ref\\_topic=3529932](https://support.google.com/accessibility/android/answer/6007100?hl=en&ref_topic=3529932) (last visited July 6, 2014).

<sup>27/</sup> Google, Touch Exploration, <https://support.google.com/accessibility/android/answer/6006598?hl=en> (last visited July 6, 2014).

<sup>28/</sup> Google Play, BrailleBack by Eyes-Free Project, <https://play.google.com/store/apps/details?id=com.googlecode.eyesfree.brailleback&hl=en> (last visited July 6, 2014).

zoom in or out from the screen from anywhere on the device), Voice Control, BlackBerry Messenger Video,<sup>29/</sup> and TTY services.<sup>30/</sup> Finally, Microsoft's Windows Phone 8.1, available on devices manufactured by Nokia, Samsung, and HTC, offers a number of customizable accessibility features for the vision-impaired, including its screen reader ("Narrator"), which is easily locatable and is operated by simple and intuitive gestures,<sup>31/</sup> as well as its "Speech" feature that permits hands-free operation.<sup>32/</sup>

Device manufacturers also continue to include their own built-in features that allow blind and low-vision users to access wireless devices. For example, Nokia handsets include voice controls, audible and tactile feedback, message reading, adjustable fonts, and user-friendly keypads,<sup>33/</sup> as well as Push-to-Talk, Text-to-Speech, and Nuance Talks (which converts displayed text into highly intelligible speech). Blind and low-vision users can also take advantage of the Nokia web browser and other screen content by using Nokia's free screen reader,<sup>34/</sup> and a free message reader.<sup>35/</sup> Other examples include: HTC's adjustable screen font

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<sup>29/</sup> Blackberry, Vision, <http://us.blackberry.com/legal/accessibility/vision.html> (last visited July 6, 2014).

<sup>30/</sup> Blackberry, *TTY Support on BlackBerry Smartphones* (Mar. 18, 2014), available at [http://docs.blackberry.com/en/smartphone\\_users/deliverables/32162/BlackBerry\\_Smartphones-TTY\\_Support\\_on\\_BlackBerry\\_Smartphones--1366931-0804124612-001-US.pdf](http://docs.blackberry.com/en/smartphone_users/deliverables/32162/BlackBerry_Smartphones-TTY_Support_on_BlackBerry_Smartphones--1366931-0804124612-001-US.pdf).

<sup>31/</sup> Windows Phone, Use Narrator on my phone, <http://www.windowsphone.com/en-us/how-to/wp8/settings-and-personalization/use-narrator-on-my-phone> (last visited July 6, 2014).

<sup>32/</sup> Windows Phone, Accessibility On My Phone, <http://www.windowsphone.com/en-us/how-to/wp7/basics/ease-of-access-on-my-phone> (last visited July 6, 2014).

<sup>33/</sup> Nokia, Text-to-Speech, <http://www.nokiaaccessibility.com/tts.html> (last visited July 6, 2014).

<sup>34/</sup> Nokia, About the Nokia Screen Reader, <http://www.nokiaaccessibility.com/screenReader.html> (last visited July 6, 2014).

<sup>35/</sup> Nokia, Nokia TTS Message Reader, <http://www.nokiaaccessibility.com/messageReader.html> (last visited July 6, 2014).

sizes in emails and webpages; Samsung’s Galaxy 5’s Dark Screen option;<sup>36/</sup> LG G2’s built-in screen magnifier;<sup>37/</sup> and Motorola Moto X’s combined screen reader with a Braille display.<sup>38/</sup>

Manufacturers and wireless service providers often work together to offer additional accessibility features for people who are blind or have low vision. For example, Sprint’s “Accessible Now” comes preloaded on the LG F3, Flex, and G2 phones, and offers voice guidance right “out of the box” to help set up and activate the phone.<sup>39/</sup> In addition, manufacturers have also worked with the blind and low-vision community to develop and implement the American Foundation for the Blind’s (“AFB”) Small Screen Research guidelines.<sup>40/</sup> As a result of these consultation efforts, manufacturers incorporate a number of design options in their devices and products for blind or low vision users, such as inverted color displays, simplified menus with larger font, predictive text, and voice commands.

#### **b. Deaf and hard of hearing-related features**

Wireless equipment manufacturers continue to offer innovative features that meet the needs of the deaf and hard of hearing. Wireless devices allow users to adjust visible and vibrating alerts for voice calls, texts, e-mails, and other notifications, and many devices also have adjustable maximum volume and are designed to be HAC.

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<sup>36/</sup> Samsung Tomorrow, *All Access: Galaxy S5 Accessibility Features* (Apr. 21, 2014), available at <http://global.samsungtomorrow.com/?p=35952>. This feature saves battery power and protects the user’s privacy.

<sup>37/</sup> amovil, *LG G2, Powerful, Intuitive and Accessible to Blind Users* (Nov. 20, 2013), available at <http://www.amovil.es/en/news/lg-g2-powerful-intuitive-and-accessible-blind-users>.

<sup>38/</sup> Sprint, Motorola Moto X User Guide, [http://eguides.sprint.com/support/eguides/motorolamotox/index.html#motorola\\_moto\\_x\\_ug/braille.html#kanchor305](http://eguides.sprint.com/support/eguides/motorolamotox/index.html#motorola_moto_x_ug/braille.html#kanchor305) (last visited July 6, 2014).

<sup>39/</sup> Sprint, Information for Customers Who Are Blind or Visually Impaired, <http://www.sprint.com/landings/accessibility/vision.html> (last visited July 6, 2014).

<sup>40/</sup> AFB, Standards for Small Visual Displays, <http://www.afb.org/info/programs-and-services/technology-evaluation/current-initiatives/standards-for-small-visual-displays/1235> (last visited July 6, 2014).

Manufacturers and platform designers are also taking steps above and beyond these functions to provide the greatest possible experience to deaf and hard of hearing users. Smartphones that operate Apple’s iOS and Google’s Android 4.4 and higher can take advantage of captioning software for video applications that support captions.<sup>41/</sup> In addition, smartphones that offer front-facing cameras enable video calling and chat applications that can be used by people who communicate using American Sign Language (“ASL”). The Nokia LPS-6 enables T-coil-equipped hearing aid users to access wireless calls directly through their hearing aid,<sup>42/</sup> and Motorola offers a range of accessibility services on its devices including CrystalTalk (a noisemasking algorithm within the phone that compensates for background noise and makes it easier to hear the target audio), VibraCall Alert (a vibrating alert system), verbal readouts of screen information, voice dialing, predictive text, and voice commands.<sup>43/</sup> BlackBerry’s Natural Sound feature also enables users to hear nuances and variations in tone.<sup>44/</sup>

### **c. Dexterity-related features**

Equipment manufacturers offer a number of dexterity-related features, such as “no slip” coatings, external stylus support, external keyboard support, predictive text (auto-correct), voice commands, and Bluetooth connectivity. Many manufacturers, such as HTC, offer smartphones with built-in accessibility features such as haptic feedback. Apple’s AssistiveTouch allows users to adapt the multi-touch screen of iOS devices to suit their physical needs. In addition, Apple

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<sup>41/</sup> Apple, iOS Closed Captioning, <http://support.apple.com/kb/HT5875> (last visited July 14, 2014); Google Developers, DevBytes: Android 4.4 Closed Captioning, <https://developers.google.com/live/shows/5299717634260992> (last visited July 14, 2014).

<sup>42/</sup> Nokia, Nokia Wireless Loopset LPS-6 – Easy listening, <http://www.nokiaaccessibility.com/loopset.html> (last visited July 6, 2014).

<sup>43/</sup> Motorola, Accessibility, <http://responsibility.motorola.com/index.php/consumers/accessibility/> (last visited July 6, 2014).

<sup>44/</sup> Inside BlackBerry, *Meet the New Blackberry Z30 Smartphone with BlackBerry 10.2.1 OS* (Sept. 18, 2013), available at <http://blogs.blackberry.com/2013/09/blackberry-z30/>.

devices support third-party assistive devices that help users interact with iPhone, iPad, and iPod touch, such as “Switch Control” that allows users to navigate sequentially through onscreen items and perform specific actions using a variety of Bluetooth-enabled switch hardware.<sup>45/</sup> Smartphones that support Google’s Android Touch and Hold Delay service lets users set a predetermined amount of time for tapping and holding the screen.<sup>46/</sup> Google’s Android TalkBack speech function is useful for those with limited dexterity because users can navigate the phone by swiping across the screen.

**d. Cognition-related features**

Most mobile devices also offer a number of features that are useful for individuals with cognitive disabilities, including photograph-based “phone books” and contact lists, voice dialing, voice operations, and options to eliminate screen time-outs that make more complicated functions significantly simpler. Pantech’s Breeze phones have simplified display options to make accessing functionalities easier,<sup>47/</sup> and Samsung offers an “easy” mode on its Android-based smartphones that achieves a similar effect.<sup>48/</sup>

**e. New personal assistant programs also enable accessibility.**

In addition to accessibility solutions that target specific disabilities, many platforms have developed mobile “personal assistant” programs that ease everyday tasks and operations of mobile devices for people of all different abilities. For example, Apple’s Siri responds to voice

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<sup>45/</sup> Apple, Using AssistiveTouch on Your iOS Device, <http://support.apple.com/kb/HT5587> (last visited July 6, 2014).

<sup>46/</sup> Google, Touch & Hold Delay, <https://support.google.com/accessibility/android/answer/6006989?hl=en> (last visited July 6, 2014).

<sup>47/</sup> Pantech Mobile, Pantech Breeze IV, <http://www.pantechusa.com/phones/breeze-iv/> (last visited July 11, 2014).

<sup>48/</sup> Samsung, What is Easy Mode (Started Mode), and How Do I Use It On My Samsung Galaxy Note II?, <http://www.samsung.com/us/support/howtguide/N0000003/10091/120408> (last visited July 11, 2014).

commands in assisting users with text messages, phone calls, web browsing, and calendar keeping,<sup>49/</sup> and Google's Android Google Now uses contextual data from a user's device and from other Google products, plus data from third-party products, to anticipate users need for specific information, including traffic information, weather, and even sports news.<sup>50/</sup> Microsoft recently released its Windows Phone personal assistant application, Cortana, which enables users to access the service using their preferred method of communication by voice for blind or low-vision users or text for the deaf or hard of hearing.<sup>51/</sup>

## **2. New feature phone offerings seek to provide accessible solutions, particularly for the blind and visually impaired.**

Wireless providers and equipment manufacturers continue to work together to develop feature phone offerings designed specifically for the blind and people with low vision.<sup>52/</sup> AT&T has carried all four generations of Pantech's Breeze phones, which are designed for accessibility using universal design principles in a simple, flip-phone design.<sup>53/</sup> In 2013, Sprint and Kyocera launched three new feature phones: the Kyocera Kona, the Kyocera Verve, and the Kyocera Duraplus. The Kyocera Kona is the first feature phone to offer a user interface with verbal descriptions of navigation and includes variable speed text-to-speech service, dedicated In Case

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<sup>49/</sup> Apple, Siri, <https://www.apple.com/ios/siri/> (last visited July 6, 2014).

<sup>50/</sup> Google, Introducing Google Now, <http://www.google.com/landing/now/#whatisit> (last visited July 6, 2014); Google, About Google Now, [https://support.google.com/websearch/answer/2819496?hl=en&ref\\_topic=6032673](https://support.google.com/websearch/answer/2819496?hl=en&ref_topic=6032673) (last visited July 6, 2014). Google Now won Popular Science's Innovation of the Year award in 2012. See Google, About Google Now, [https://support.google.com/websearch/answer/2819496?hl=en&ref\\_topic=6032673](https://support.google.com/websearch/answer/2819496?hl=en&ref_topic=6032673) (last visited July 6, 2014). Google is currently working toward third-party app integration. See Nguyen Chuong, *Google Now Begins to Integrate Data with Third-Party Apps*, GOTTA BE MOBILE (Dec. 5, 2013), available at <http://www.gottabemobile.com/2013/12/05/google-now-begins-integrate-data-third-party-apps/>.

<sup>51/</sup> Windows Phone, Meet Cortana, <http://www.windowsphone.com/en-us/how-to/wp8/apps/meet-cortana> (last visited July 6, 2014). Cortana is also available for third-party developers.

<sup>52/</sup> See *Public Notice* ¶ 7.

<sup>53/</sup> Pantech Mobile, Pantech Breeze IV, <http://www.pantechusa.com/phones/breeze-iv#features> (last visited July 6, 2014).

of Emergency (“ICE”) and 9-1-1 shortcuts, and a tactile keyboard with well-defined buttons.<sup>54/</sup> The Kyocera Verve has a built-in screen reader and slide out, tactile QWERTY keyboard, and supports voice dialing,<sup>55/</sup> and the Kyocera Duraplus has a tactile keypad, is Bluetooth capable, utilizes Push-to-Talk, and is TTY and HAC-compatible.<sup>56/</sup> Sprint also offers the Kyocera Torque – the first U.S. device to feature Kyocera’s Smart Sonic Receiver technology, which eliminates the need for a traditional handset speaker. The Torque uses vibrations to transmit sounds directly to the eardrum and offers unparalleled sound quality for people with hearing loss.<sup>57/</sup>

The need for accessibility solutions has also sparked entirely new business models that focus directly on the needs of individuals with disabilities. For example, wireless service provider GreatCall specializes in products and services designed with seniors in mind. GreatCall’s simple Jitterbug 5 phone has large buttons, a backlit keypad, and a bright color screen, all of which make it easier for seniors or users with low vision<sup>58/</sup> and its GreatCall Splash is a waterproof, one-button mobile personal medical alert device that can quickly connect to

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<sup>54/</sup> Sprint News Release, *Sprint Launches Kyocera Kona – Industry First Feature Phone with Verbal Translation of Internet Browsing* (Sept. 6, 2013), available at <http://newsroom.sprint.com/news-releases/sprint-launches-kyocera-kona-industry-first-feature-phone-with-verbal-translation-of-internet-browsing.htm>; see also Bill Holton, *Cell Phone Accessibility: Reviewing the LG Optimus F3 and the Kyocera Kona*, AFB ACCESSWORLD MAGAZINE (Nov. 2013), available at <http://www.afb.org/afbpress/pub.asp?DocID=aw141105>.

<sup>55/</sup> Sprint News Release, *Kyocera Verve Arrives at Sprint and Boost Mobile Boasting Advanced Accessibility and Unmatched Affordability* (Apr. 8, 2014), available at <http://newsroom.sprint.com/news-releases/kyocera-verve-arrives-at-sprint-and-boost-mobile-boasting-advanced-accessibility-and-unmatched-affordability.htm>.

<sup>56/</sup> Sprint, Printable User Guide for Duraplus by Kyocera, [http://shop.sprint.com/global/pdf/user\\_guides/kyocera/duraplus/kyocera\\_duraplus\\_ug.pdf](http://shop.sprint.com/global/pdf/user_guides/kyocera/duraplus/kyocera_duraplus_ug.pdf) (last visited July 6, 2014).

<sup>57/</sup> Kyocera, Smart Sonic Receiver, <http://www.kyoceramobile.com/smart-sonic-receiver/> (last visted July 10, 2014).

<sup>58/</sup> Great Call, Jitterbug, <http://www.greatcall.com/cell-phones/jitterbug> (last visited July 6, 2014).

emergency services.<sup>59/</sup> Odin Mobile, a mobile virtual network operator that operates on T-Mobile's network, specifically markets to the blind and low-vision community.<sup>60/</sup> In addition to a number of devices manufactured by third parties,<sup>61/</sup> Odin Mobile offers its own Odin VI phone (a talking cell phone that is 100 percent accessible to the blind)<sup>62/</sup> and the Emporia Essence (designed for people with low vision).<sup>63/</sup> Project RAY is similarly devoted to providing advanced communications service solutions to the blind and visually impaired, offering two smartphone models that include, among other features, an eyes-free user interface, image identification and color recognition, text-to-speech, panic and emergency services, audio-digital library, and picture transcription.<sup>64/</sup>

**3. Advertisements, product packaging for equipment, and provider and manufacturer websites are designed to provide information to people with disabilities.**

CTIA member companies provide accessibility information online, in advertisements, and in product packaging in order to ensure that consumers are informed about their choices when selecting mobile services and devices that can meet their particular needs. In addition to providing accessibility information online, HTC, for example, also provides information about the accessibility features of its products through its customer service representatives and in its

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<sup>59/</sup> GreatCall, GreatCall Splash with 5Star Medical Alert Service, <http://www.greatcall.com/products/greatcall-splash-details> (last visited July 14, 2014). The GreatCall Splash operates on the Verizon network.

<sup>60/</sup> Odin Mobile, About Us, <http://odinmobile.com/about-us/> (last visited July 6, 2014).

<sup>61/</sup> Odin Mobile, Nexus 5 from Google, <http://odinmobile.com/phones/nexus-5/> (last visited July 6, 2014).

<sup>62/</sup> Odin Mobile, Odin VI, <http://odinmobile.com/phones/odin-vi/> (last visited July 6, 2014).

<sup>63/</sup> Odin Mobile, Emporia Essence, <http://odinmobile.com/phones/emporia-essence/> (last visited July 6, 2014). The font size on the Emporia Essence is pre-set to large and the screen contrast is pre-set to the highest level, and the phone also comes with a "Call for Care" button that, when pushed, automatically dials five individually stored numbers in sequence until the call is picked up.

<sup>64/</sup> Project Ray, Products, <http://www.project-ray.com/products> (last visited July 6, 2014).

product packaging materials, including in-box safety and regulatory guides and user manuals.

User manuals are also available for download on the HTC website.<sup>65/</sup>

SouthernLINC provides accessibility information from its handset providers on its website, while U.S. Cellular lists all of its currently available wireless devices, and provides the HAC ratings of those devices, on both its website and on feature price cards in company-owned stores.<sup>66/</sup> U.S. Cellular also labels its device boxes with the relevant HAC ratings, includes HAC information in accompanying user manuals, and educates its customer service associates about HAC requirements so that they can address questions regarding HAC issues from customers who use hearing aids. Sprint, as part of its Good Works program, offers user guides which list the devices (and their features) that are best suited to meet the needs of consumers who are blind or low-vision<sup>67/</sup> and who are deaf or have hearing loss.<sup>68/</sup>

**C. A Diverse Wireless Ecosystem Of Services, Equipment And Applications Is Enhancing Accessibility.**

The collaborative nature of the wireless ecosystem allows consumers, including people with disabilities, to take advantage not only of the innovative products and services offered directly by wireless service providers and device manufacturers but also applications offered by third parties that are designed to work with wireless products and services.

**1. Service providers offer a variety of “mobile accessibility” applications and services to ensure consumers can find and utilize innovative accessibility solutions.**

Wireless service providers understand that to be effective, accessibility functions must be

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<sup>65/</sup> HTC, Accessibility, <http://www.htc.com/us/Accessibility> (last visited July 14, 2014).

<sup>66/</sup> U.S. Cellular, Hearing Aid Compatibility, <http://www.uscellular.com/uscellular/services/hearing-aid.jsp> (last visited July 6, 2014).

<sup>67/</sup> Sprint, Accessible Phones, [http://newsroom.sprint.com/content/1003/files/CR%20Accessible%20Devices%20Vision%2006-25-2014\(1\).pdf](http://newsroom.sprint.com/content/1003/files/CR%20Accessible%20Devices%20Vision%2006-25-2014(1).pdf) (last visited July 10, 2014).

<sup>68/</sup> Sprint, Accessible Phones, <http://newsroom.sprint.com/content/1003/files/CR%20Accessible%20Devices%20Hearing%2006-26-2014.pdf> (last visited July 10, 2014).

easy to identify and use. Many service providers have developed approaches to ensure their customers can take advantage of all available accessibility features and enhancements that applications can support. For example, Sprint offers several ID Packs that are applications which are grouped together based on a particular topic, such as accessibility, including: the Relay ID Pack (comprised of Wireless CapTel, Mobile IP Relay, and a number of entertainment and communications apps);<sup>69/</sup> the Neurodiversity ID Pack (helping individuals with cognitive and neuro-developmental disabilities to accelerate learning and overcome communications barriers);<sup>70/</sup> and the Active Seniors ID Pack (offering apps selected for seniors in collaboration with the American Association of Retired Persons (“AARP”), Health Savvy, and others for free to any Sprint and Boost customer).<sup>71/</sup> AT&T offers free Mobile Accessibility software for users of Google’s Android 2.1 or later that is specifically designed for the blind and visually impaired.<sup>72/</sup> Verizon Wireless offers a Mobile Accessibility Application and Relay Services suite, which includes 10 accessibility apps powered by Nuance Vocalizer.<sup>73/</sup> Verizon Wireless

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<sup>69/</sup> Sprint, Sprint Relay, <http://ria.sprint.com/ria/pages/index.jsp?ms=SprintID#/detail?egoID=PCS677379> (last visited July 6, 2014).

<sup>70/</sup> Sprint News Release, *Sprint Launches Neurodiversity ID Pack, Offers Mobile Solutions for Customers with Neurodevelopmental Disabilities* (June 18, 2014), available at <http://newsroom.sprint.com/news-releases/sprint-launches-neurodiversity-id-pack-offers-mobile-solutions-for-customers-with-neurodevelopmental-disabilities.htm>. The Neurodiversity ID Pack features 25 unique applications and weblinks that were chosen with the help of several organizations focused on disabilities that impact learning, attention and behavior, including the National Center for Learning Disabilities, Dyspraxia Foundation USA and QSAC.

<sup>71/</sup> Sprint, Active Seniors, <http://ria.sprint.com/ria/pages/index.jsp?ms=SprintID#/detail?egoID=PCS678821> (last visited July 6, 2014).

<sup>72/</sup> AT&T, AT&T Mobile Accessibility for Android, <http://www.wireless.att.com/learn/articles-resources/disability-resources/mobile-speak-magnifier.jsp> (last visited July 6, 2014).

<sup>73/</sup> Verizon, Relay Service, <http://www.verizonwireless.com/aboutus/accessibility/using-vrs.html> (last visited July 6, 2014); see also Verizon News Release, *Verizon Wireless Introduces Mobile Accessibility App for Customers Who Are Visually Impaired* (Aug. 16, 2012), available at <http://www.verizonwireless.com/news/article/2012/08/pr2012-08-16i.html>.

has been working with a third party to develop and launch an Android app for the blind.<sup>74/</sup> T-Mobile customers with Google Android smartphones can also download IDEAL Access 4 T-Mobile<sup>®</sup>, which makes it easy to install applications that are accessible to everyone, including individuals with print disabilities.<sup>75/</sup>

In addition, wireless service providers and manufacturers have developed initiatives to encourage additional accessible app innovation. For example, AT&T partnered with Autism Speaks to host a hack-a-thon in 2013 to develop apps that would help individuals with autism and the Nokia Create: Do Good contest encouraged Windows Phone app developers to create new or updated apps to make the lives of people with low vision easier, resulting in a number of innovative new apps such as The Funnies from Yowlu SCP, a game designed to be accessible to kids with visual impairment.<sup>76/</sup>

## **2. Manufacturers increasingly provide resources for third-party application developers to utilize and ensure compatibility with built-in accessibility features.**

In addition to developing their own accessibility features, device manufacturers also provide resources via online guides to facilitate third-party developer awareness of the needs of people with disabilities. These guides encourage application developers to consider basic accessibility features, including making sure that buttons within applications are labeled in a

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<sup>74/</sup> VelaSense, <http://www.velasense.com/> (last visited July 6, 2014).

<sup>75/</sup> Google Play, IDEAL ACCESS 4 T-Mobile, <https://play.google.com/store/apps/details?id=com.ideal.accessibilityinstaller.tmobile&hl=en> (last visited July 11, 2014).

<sup>76/</sup> Nokia Developer, *Congratulations to Nokia Create Master & Do Good Mission winners* (Jan. 14, 2013), available at <http://developer.nokia.com/blogs/news/congratulations-to-nokia-create-master-do-good-mission-winners>.

meaningful way to improve the experience for users relying on screen readers, in addition to accessible user interface design tips.<sup>77/</sup>

### **3. Third-party developers continue to release innovative applications to meet the needs of people with disabilities.**

Third-party developers are continuously developing new applications that meet the needs of people with disabilities. Some apps are designed to improve accessibility of the mobile device itself, while others provide independent solutions that address specific accessibility issues.

#### **a. Applications that improve accessibility of the mobile device**

A few examples of third-party apps that are available on Apple's iPhone for the visually impaired include the BrailleTouch app (which features a unique split keyboard design that is based on the layout of the Braille cell and the dimensions of the iPhone screen)<sup>78/</sup> and ViA (which helps blind and low-vision users find apps in the App store to meet their needs).<sup>79/</sup>

Google Android users can also take advantage of the EqualEyes Accessibility app,<sup>80/</sup> the Ideal Accessibility Installer,<sup>81/</sup> and the Eyes-Free Shell app.<sup>82/</sup> Other apps, like Fleksy – which

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<sup>77/</sup> See, e.g., Apple, Accessibility Programming Guide for iOS, <https://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/iPhoneAccessibility/Introduction/Introduction.html>; Motorola, Apps for Accessibility, [http://responsibility.motorola.com/index.php/consumers/accessibility/accessibility\\_partners/apps\\_for\\_accessibility/](http://responsibility.motorola.com/index.php/consumers/accessibility/accessibility_partners/apps_for_accessibility/); Windows Phone, Guidelines for Designing Accessible Apps, <http://msdn.microsoft.com/en-us/library/windows/apps/hh700407.aspx>; Blackberry, Best Practice: Designing Accessible Applications, [http://docs.blackberry.com/en/developers/deliverables/20100/BP\\_Designing\\_accessible\\_applications\\_6\\_0\\_1200775\\_11.jsp](http://docs.blackberry.com/en/developers/deliverables/20100/BP_Designing_accessible_applications_6_0_1200775_11.jsp); Android, Accessibility, <http://developer.android.com/guide/topics/ui/accessibility/index.html> (each last visited July 6, 2014). Additionally, Google does not charge for downloaded applications if a user discovers within 15 minutes that the app is inaccessible.

<sup>78/</sup> iTunes, Braille Touch by BrailleTech, LLC, <https://itunes.apple.com/us/app/brailletouch/id579725651?mt=8> (last visited July 6, 2014).

<sup>79/</sup> iTunes Store, ViA – By Braille Institute, <https://itunes.apple.com/us/app/via-by-braille-institute/id528499232?mt=8> (last visited July 6, 2014).

<sup>80/</sup> Google Play, EqualEyes Accessibility by Equal Eyes Solutions Ltd., <https://play.google.com/store/apps/details?id=com.equaleyes> (last visited July 6, 2014).

<sup>81/</sup> Google Play, IDEAL Accessible App Installer by IDEAL Group, <https://play.google.com/store/apps/details?id=com.ideal.backbundle> (last visited July 6, 2014).

replaces a device's on-screen keyboard with a text prediction engine and can correct a user's text input even when the user misses every button or types outside the keyboard area altogether – are available on both Google's Android and Apple's iOS platforms.<sup>83/</sup>

A variety of educational and cognitive apps also are intended to serve particular disabilities. AccessNote, which was developed by AFB, is the first notetaking app developed and designed specifically for users with vision loss.<sup>84/</sup> Autism Apps provides a list of apps that can be used by people diagnosed with autism, Down Syndrome, and other cognitive skills needs,<sup>85/</sup> while Alzheimer's Cards stimulates memory and conversation using pictures.<sup>86/</sup> A number of websites are available to help individuals with disabilities find more information regarding accessible mobile apps.<sup>87/</sup>

#### **b. Applications that assist with productivity**

Some app developers are focusing on turning mobile devices into tools that make the rest of the world more accessible to individuals with disabilities. For example, the LookTel Money

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<sup>82/</sup> Google Play, Eyes-Free Shell by Eyes-Free Project, <https://play.google.com/store/apps/details?id=com.google.marvin.shell> (last visited July 6, 2014).

<sup>83/</sup> Fleksy, <http://fleksy.com/> (last visited July 6, 2014).

<sup>84/</sup> AFB, *Product Announcement: AFB AccessNote Notetaker App Released!* (Feb. 2013), available at <http://www.afb.org/afbpres/pub.asp?DocID=aw140202>.

<sup>85/</sup> Autism Apps, <http://touchautism.com/app/autism-apps/> (last visited July 6, 2014).

<sup>86/</sup> iTunes, Alzheimer's Cards, <https://itunes.apple.com/us/app/alzheimers-cards/id351818634?mt=8> (last visited July 6, 2014).

<sup>87/</sup> See, e.g., Appcessible, 17 iPhone, iPad and Android Apps for the Blind and Visually Impaired, <http://www.appcessible.org/17-iphone-ipad-android-apps-blind-visually-impaired/>; AppAdvice, Apps for Blind and Visually Impaired, [http://appadvice.com/applist\\_ipad\\_client\\_view/apps-for-the-visually-impaired](http://appadvice.com/applist_ipad_client_view/apps-for-the-visually-impaired); AppleVis, iOS Apps Developed Specifically for the Blind or People with Low Vision, <http://www.applevis.com/apps/ios-apps-for-blind-and-vision-impaired>; Apps4Android, Best 10 Android Apps for the Visually Impaired, <http://www.apps4android.org/?p=4107>; Accessible Technology Coalition, Top 10 iPhone Apps for People Who Are Deaf or Hard of Hearing, <http://atcoalition.org/news/top-10-iphone-apps-people-who-are-deaf-or-hard-hearing>; BrainLine, 20 Life-Changing Android Apps for People with Brain Injury, <http://www.brainline.org/content/2011/07/20-android-apps-for-people-with-brain-injury.html>; BrainLine, 45 Life-Changing iPhone and iPad Apps for People with Brain Injury, <http://www.brainline.org/content/2011/05/23-lifechanging-iphone-ipad-apps-for-people-with-brain-injury.html> (each last visited July 6, 2014).

Reader instantly recognizes currency and speaks the denomination, enabling people with visual impairments or blindness to quickly and easily identify and count bills.<sup>88/</sup> Color ID uses a phone's camera to identify and speak the color of items in real-time,<sup>89/</sup> and Talking Goggles goes one step further, recognizing images and speaking out what it finds.<sup>90/</sup> In addition, the RxmindMe Prescription/Medicine Reminder and Pill Track sends alerts when it is time to take medication and tracks how many pills are left on a prescription.<sup>91/</sup>

#### **4. Service providers support third-party providers that serve specific accessibility and older adult communities.**

In addition to their efforts to enhance and promote the accessibility of their own services and products, service providers facilitate the efforts of certain third-party providers that are specifically aimed at serving the needs of people with disabilities. For example, as mentioned above, Odin Mobile operates over T-Mobile's network to provide mobile communications services to the blind and visually impaired.<sup>92/</sup> Great Call, which offers the senior friendly

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<sup>88/</sup> LookTel, Money Reader, <http://www.looktel.com/moneyreader> (last visited July 6, 2014).

<sup>89/</sup> Google Play, Color ID by GreenGar, <https://play.google.com/store/apps/details?id=greengar.color.identifier&hl=en> (last visited July 6, 2014).

<sup>90/</sup> iTunes Store, Talking Goggles by Sparkling Apps BV, <https://itunes.apple.com/us/app/talking-goggles-camera-speech/id602999586?mt=8> (last visited July 6, 2014). Other examples of accessible apps include: LookTel Recognizer (which allows people with visual impairments or blindness to identify objects and store images in library or database for the iPhone camera to identify in real time); VelaSense (a hands free assistive technology for use with Android devices that integrates video, motion, and audio data that are gathered in the user's environment, and delivers the information through multi-sensory input to non-sight sensory systems, such as hearing and touch); Blind Square (an augmented reality GPS app for iPhone and Android devices that enables the app to determine the most relevant information and then voice that information using high quality speech synthesis); Prizmo (a photo-based scanner app that lets users scan and recognize documents and export them); TalkCalc (a talking calculator for people with dexterity and vision difficulties); Digit-Eye (which pairs with Bluetooth connected refreshable Braille displays to get product information and preparation instructions); and TapTapSee (a photo-based identification app).

<sup>91/</sup> iTunes, RxmindMe Prescription / Medicine Reminder and Pill Tracker, <https://itunes.apple.com/us/app/rxmindme-prescription-medicine/id379864173?mt=8> (last visited July 6, 2014).

<sup>92/</sup> Janet Ingber, *Odin Mobile: A New Cell Phone Carrier Specifically for People Who Are Blind or Have Low Vision*, AFB ACCESSWORLD MAGAZINE, Vol.14, No. 10 (Oct. 2013), available at <http://www.afb.org/afbpres/pub.asp?DocID=aw141008>.

Jitterbug products, operates on Verizon,<sup>93/</sup> and Snapfon offers simple cellphone service for seniors and may operate on both AT&T and T-Mobile.<sup>94/</sup> In addition, the AARP's Consumer Cellular service is supported by AT&T networks.<sup>95/</sup>

## **II. THE WIRELESS INDUSTRY HAS GONE BEYOND THE CVAA TO FULFILL VOLUNTARY COMMITMENTS THAT IMPROVE ACCESSIBILITY IN PUBLIC SAFETY COMMUNICATIONS AND INCREASE AWARENESS OF ACCESSIBLE PRODUCTS AND SERVICES**

In their ongoing efforts to ensure that all consumers, including people with disabilities, can take advantage of innovative wireless products and services, member companies have not only complied with the letter, spirit, and intent of the CVAA, but also have made substantial voluntary commitments that demonstrate how collaboration, rather than regulation, works best to address critical issues facing dynamic industries.

### **A. The Wireless Industry Has Fulfilled Voluntary Commitments To Support Accessible Public Safety Services.**

CTIA and its member companies have a strong record of enhancing public safety so that wireless consumers of all abilities may reach and receive emergency services in their greatest time of need, and will continue to support these efforts. In May 2014, America's four nationwide wireless providers – AT&T, Sprint, T-Mobile, and Verizon Wireless – took a significant step toward offering unparalleled emergency communications tools for people with disabilities by meeting their voluntary commitment to make Text-to-911 available to public

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<sup>93/</sup> Verizon New Release, *Jitterbug's Easy-to-Use Services Are Now Available On The Verizon Wireless Network* (Aug. 26, 2009), available at <http://www.verizonwireless.com/news/article/2009/08/pr2009-08-26d.html>.

<sup>94/</sup> Snapfon, Technical Specification, [https://www.snapfon.com/support/eztwo/tech\\_specs.php](https://www.snapfon.com/support/eztwo/tech_specs.php) (last visited July 11, 2014).

<sup>95/</sup> CNET, Consumer Cellular, <http://www.cnet.com/products/consumer-cellular/> (last visited July 11, 2014).

safety answering points (“PSAPs”) that request, and are capable of supporting, the service.<sup>96/</sup>

These carriers not only worked collaboratively with each other and leading public safety organizations to meet this critical milestone, but also responded to the deaf, hard of hearing, and speech impaired communities’ request for direct access to 9-1-1 through text-based wireless communications.

Once adopted by PSAPs, Text-to-911 can offer *direct access* to 9-1-1 emergency services for the deaf, hard of hearing, and speech-impaired consumers of these four carriers in the same ways they typically communicate today with wireless technology. Although a voice, TTY, or Relay call continues to be the preferred method to contact 9-1-1 in an emergency, particularly because voice calls to 9-1-1 provide PSAPs with the most information about the emergency situation, the availability of Text-to-911 is key to ensuring that all Americans, including those with disabilities, can reach 9-1-1 emergency services when making a voice call is not possible or recommended.

In its Biennial Report to Congress, the FCC should note that the four nationwide carriers’ voluntary Text-to-911 commitments followed the Emergency Access Advisory Committee’s (“EAAC”) recommendation for a text-based wireless service to provide direct access to 9-1-1 as an “interim” solution until Next Generation 9-1-1 services are widely available.<sup>97/</sup> While the CVAA established the EAAC to consider the accessibility requirements for IP-based emergency services, the EAAC’s members, including wireless service providers, equipment manufacturers, and public safety and accessibility advocates, worked collaboratively to develop a report and

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<sup>96/</sup> See CTIA, *Nationwide Wireless Providers Met Voluntary Text to 911 Commitment* (May 16, 2014), available at <http://blog.ctia.org/2014/05/16/text-to-911-commitment/>.

<sup>97/</sup> FCC Emergency Access Advisory Committee Report and Recommendations, PS Docket No. 10-255, at 26 and 28-30 (filed Dec. 12, 2011) (resubmitted in final Jan. 26, 2012) (“EAAC Recommendations”).

recommendations that recognize how existing wireless communications capabilities can be used to meet the emergency communications needs of people with disabilities. The FCC should recognize that collaboration among stakeholders, especially on accessibility issues, can produce positive results without the need for regulation.

In addition, wireless service providers voluntarily support Wireless Emergency Alert (“WEA”) messages to WEA-capable handsets that include features specifically designed to address accessibility issues, such as a unique tone and vibration cadence for the deaf and hard of hearing. The WEA service (established by the wireless industry in cooperation with the FCC and the Federal Emergency Management Agency) provides a free, effective opportunity to notify wireless consumers about location-specific imminent threats and other information, such as hurricanes, floods, tornadoes, Presidential Alerts, and Amber Alerts.<sup>98/</sup> Wireless providers representing more than 97 percent of subscribers participate in the program, ensuring that national and geographically-targeted emergency information is delivered directly to subscribers, including blind or low-vision subscribers, in a timely manner.<sup>99/</sup> The FCC’s Communications Security, Reliability, and Interoperability Council (“CSRIC”) is currently studying enhancements to WEA with accessibility in mind.<sup>100/</sup>

**B. The Wireless Industry Continues To Engage In And Facilitate Substantial Voluntary Outreach And Education Activities Within The Accessibility And Older Adult Communities.**

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<sup>98/</sup> See Comments of CTIA–The Wireless Association, MB Docket Nos. 12-107, 11-43, at 7-8 (filed July 23, 2013) (“CTIA Emergency Information Comments”); see also CTIA, *Your Wireless Life, Wireless Emergency Alerts*, <http://www.ctia.org/your-wireless-life/consumer-tips/wireless-emergency-alerts> (last visited July 6, 2014).

<sup>99/</sup> CTIA Emergency Information Comments at 2-3, 8.

<sup>100/</sup> See CSRIC, *Working Group 2: Wireless Emergency Alerts, Status Update* (June 18, 2014), available at [http://transition.fcc.gov/pshs/advisory/csric4/CSRIC\\_IV\\_WG-2\\_Status\\_061814.pdf](http://transition.fcc.gov/pshs/advisory/csric4/CSRIC_IV_WG-2_Status_061814.pdf).

The wireless industry also demonstrates its commitment to accessibility issues through voluntary engagement with the accessibility and older adult communities. Through conferences and meetings, as well as through individualized efforts to educate consumers about their wireless products and services, the wireless industry works to ensure that all consumers, including seniors and those with disabilities, are informed about the availability of a diverse range of accessible wireless products, services, and applications.

**1. The wireless industry has continued to demonstrate a strong commitment to working with the disability and older adult communities through conferences and meetings.**

CTIA and its member companies continue to collaborate and build strong relationships with the accessibility community through conferences and meetings, and through AccessWireless.org, to ensure that consumers are informed about the diverse range of wireless services, products, and applications that are available to meet their particular needs.

CTIA's AccessWireless.org website is the "first stop" for people with disabilities to obtain information about accessible wireless products and services.<sup>101/</sup> Through this website, hundreds of thousands of visitors who are interested in deaf, hard of hearing, blind, low vision, or physical, cognitive, or speech issues have gotten tips for purchasing wireless services or devices that meet their unique needs. CTIA also continues to partner with the Mobile Manufacturers Forum ("MMF") to bring the Global Accessibility Reporting Initiative ("GARI") to AccessWireless.org, which has enabled visitors to use the "find a phone" feature to search for wireless handsets based on accessibility features. In addition, AccessWireless.org offers consumers HAC training videos to better understand the HAC rating system and directs access to

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<sup>101/</sup> CTIA 2012 Comments at 12-14; *see also* CTIA, AccessWireless.org, <http://www.accesswireless.org/Home.aspx> (last visited July 6, 2014).

CTIA member companies' accessibility websites.<sup>102/</sup> CTIA's AccessWireless.org has been recognized by the Commission in the past, and has subsequently served as a model to create the FCC's Accessibility Clearinghouse website.<sup>103/</sup>

CTIA's Accessibility Outreach Initiative ("AOI") has also directly assisted member companies with their engagement with the accessibility community through a range of educational resources and representative organizations addressing various aspects of accessibility.<sup>104/</sup> Since 2013, CTIA has held seven meetings as part of the AOI to address topics related to the deaf/hear-of-hearing, blind/low-vision, and older adult communities, including website interfacing for accessibility, organization advocacy resources for industry, and understanding the mobile technology needs of older adults. Through AOI, CTIA member companies gain a broader understanding of the accessibility community's priorities and consider examples to inform their individual accessibility efforts.

CTIA and its member companies have also participated in a number of conferences and meetings to facilitate engagement with the accessibility community. Since 2012, they have participated with a variety of organizations to gain feedback on wireless accessibility issues, including the AFB, the Hearing Loss Association of America ("HLAA"), the Telecommunications Equipment Distribution Program Association ("TEDPA"), the National Association of the Deaf ("NAD"), the World Institute on Disability, and Telecommunications for the Deaf and Hard of Hearing ("TDI"). In addition, the recent M-Enabling Summit – an

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<sup>102/</sup> CTIA 2012 Comments at 13; *see also* CTIA, AccessWireless.org, GARI, <http://www.accesswireless.org/Find/Gari.aspx> (last visited July 6, 2014). The MMF is currently enhancing its website with new information, and CTIA looks forward to bringing the new version of the GARI to consumers once the updates are completed.

<sup>103/</sup> FCC, Accessibility Clearinghouse, <http://ach.fcc.gov/> (last visited July 6, 2014).

<sup>104/</sup> AccessWireless.org, *CTIA's Accessibility Outreach Initiative Hits the Ground Running* (July 26, 2013), available at [http://accesswireless.org/about-us/news/13-07-26/CTIA\\_s\\_Accessibility\\_Outreach\\_Initiative\\_Hits\\_the\\_Ground\\_Running.aspx](http://accesswireless.org/about-us/news/13-07-26/CTIA_s_Accessibility_Outreach_Initiative_Hits_the_Ground_Running.aspx).

initiative that brings together U.S. and international leaders to promote mobile accessible and assistive applications and services for senior citizens and people with disabilities – had more than 500 guests in attendance who discussed topical sessions ranging from mobile accessibility compliance to m-Health and Connected Home to mobile apps for seniors.<sup>105/</sup>

Recently, CTIA announced its interest in supporting the Partnership on Employment & Accessible Technology (“PEAT”) to promote the employment, retention, and career advancement of people with disabilities through the development, adoption, and promotion of accessible technology.<sup>106/</sup> Funded by the U.S. Department of Labor’s Office of Disability Employment Policy, PEAT will bring together employers, technology developers, thought leaders, and users around the topic of accessible technology and employment.

Finally, as part of CTIA’s outreach to older adults and seniors, CTIA collaborated with its member companies and senior advocacy organizations such as AARP, OASIS, the National Council on Aging, and Older Adults Technology Services to develop resources for seniors on topics such as choosing the right smartphone and service plan, the top types of mobile apps, and privacy and security tips. This guidance will be made available on the AccessWireless.org website in the second half of 2014.

## **2. Wireless providers engage with and educate the accessibility community and seniors about their products and services.**

In addition to industry-wide outreach, wireless service providers also continue to engage with and educate the accessibility community and seniors about their products, services, and plans. For example, Verizon Wireless has established on-going meetings with national consumer

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<sup>105/</sup> M-Enabling Summit, <http://www.m-enabling.com/> (last visited July 6, 2014).

<sup>106/</sup> Rehabilitation Engineering and Assistive Technology Society of North America, Partnership on Employment and Accessible Technology, <https://resna.org/aboutUs/resnaSponsoredProjects/partnership-on-employment-and-accessible-technology.dot> (last visited July 6, 2014).

groups and has participated in the M-Enabling Summit, and the HLAA, NAD, and American Council for the Blind annual conferences to showcase devices specific to the needs of each conference's attendees. Verizon Wireless has also created training materials for employees to use as aids in assisting customers. As another example, AT&T engages with the accessibility community to increase awareness among consumers with disabilities about their wireless products and services. In addition, the AT&T Foundation has supported the Shepherd Center's efforts to assist researchers at the Rehabilitation Engineering Research Center for Wireless Technologies ("Wireless RERC") in launching a series of seminars that help consumers with disabilities uncover the range of accessibility features found on their mobile devices.<sup>107/</sup>

T-Mobile embraces opportunities to talk more to broad audiences about its accessibility offerings as well as other products, services, and innovations designed to promote accessibility and use by the older adult community, by participating in conferences and seminars attended by organizations representing people with hearing and vision loss and members of such organizations. These are only a few of the many examples of wireless service providers engaging and educating the accessibility community about their products and services.

### **3. Member companies incorporate and prioritize engaging consumer representatives in an on-going dialogue about accessibility.**

CTIA member companies incorporate accessibility into the fabric of their business operations by creating teams and processes for accessibility and facilitating training programs related to accessibility. For example, Apple's Accessibility Support website provides information about the tools and technologies for people with disabilities built into Apple

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<sup>107/</sup> Shepherd Center, *AT&T and Rehabilitation Engineering Research Center for Wireless Technologies to Launch Mobile Device Training for People with Disabilities* (Mar. 5, 2014), available at <http://news.shepherd.org/rehabilitation-engineering-research-center-for-wireless-technologies-and-at-t-to-launch-mobile-device-training-for-people-with-disabilities/>.

products, and its Accessibility Team works internally to address accessibility-related customer queries and complaints.<sup>108/</sup> In addition, manufacturers have established teams and employ accessibility engineers to create products that consider how people with disabilities access their products.<sup>109/</sup> For example, LG has established an accessibility task force and dedicated resources to consider accessibility across multiple product lines; and HTC developed and implemented internal procedures to address accessibility, including employee training and outreach. The Microsoft Disability Answer Desk also includes specially trained agents to provide assistance to customers with disabilities, including the use of accessibility features such as screen readers, screen magnifiers, or speech recognition commands.<sup>110/</sup>

Wireless service providers have undertaken numerous initiatives to incorporate accessibility into their regular practices and procedures. For example, AT&T's Advisory Panel on Access & Aging meets quarterly to provide advice and council to AT&T's subsidiaries, affiliates, and leadership teams regarding issues of interest to the accessibility community<sup>111/</sup> and its National Center for Consumers with Disabilities provides specialized customer service representatives who can make accommodations such as arranging for an alternate billing format (*e.g.*, Braille or large print).<sup>112/</sup> Similarly, Sprint's Good Work's Program promotes accessibility

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<sup>108/</sup> Apple, Accessibility, <https://www.apple.com/accessibility/> (last visited July 6, 2014).

<sup>109/</sup> *See, e.g.*, LinkedIn, iOS Software Accessibility Engineer, <https://www.linkedin.com/jobs2/view/10062947> (last visited July 6, 2014).

<sup>110/</sup> Microsoft, Contact the Disability Answer Desk, <http://support.microsoft.com/gp/contact-microsoft-accessibility> (last visited July 6, 2014).

<sup>111/</sup> AT&T, AT&T Advisory Panel on Access & Aging, <http://www.wireless.att.com/learn/articles-resources/disability-resources/advisory-panel.jsp> (last visited July 6, 2014).

<sup>112/</sup> AT&T, The National Center for Customers with Disabilities (NCCD), <http://www.wireless.att.com/learn/articles-resources/disability-resources/nccd.jsp> (last visited July 6, 2014).

principles and goals both internally and externally;<sup>113/</sup> the Verizon Center for Disabilities provides an online resource with communication options for persons who are deaf or have a hearing, vision, cognitive, speech, or mobility disability;<sup>114/</sup> T-Mobile’s Consumer Accessibility Council reinforces the company’s commitment to providing accessible products and services by engaging consumers who either have disabilities or representatives that have great experience in addressing communications accessibility issues;<sup>115/</sup> and U.S. Cellular’s CapAble Associate Network (“CAN”) engages employees, utilizing customer feedback and interactions, to develop educational resources that increase awareness of accessibility experiences.<sup>116/</sup>

#### **4. The wireless industry has been recognized for advancing accessibility goals.**

The wireless industry’s substantial efforts to provide accessible products and services have not gone unnoticed by the accessibility community. CTIA’s AccessWireless.org website received the FCC Chairman’s Award for Advancement in Accessibility in 2011 in recognition of the “significant technological innovations to help consumers with disabilities benefit from the country’s communications technologies.”<sup>117/</sup> Since then, the website also has received HLAA’s

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<sup>113/</sup> A comprehensive list of Sprint’s accessibility offerings is located at <http://newsroom.sprint.com/content/1003/files/CR%20Accessibility%20FS%2003-04-2014.pdf>.

<sup>114/</sup> Verizon, Verizon Center for Customers with Disabilities, <http://www.verizon.com/Support/Residential/Generic/Phone+Generic/Phone+Product/Questions/CustomersWithDisabilities.htm> (last visited July 6, 2014).

<sup>115/</sup> T-Mobile, Accessibility Policy, [http://www.t-mobile.com/company/companyinfo.aspx?tp=Abt\\_Tab\\_ConsumerInfo&tsp=Abt\\_Sub\\_AccessibilityPolicy](http://www.t-mobile.com/company/companyinfo.aspx?tp=Abt_Tab_ConsumerInfo&tsp=Abt_Sub_AccessibilityPolicy) (last visited July 6, 2014).

<sup>116/</sup> U.S. Cellular has also partnered with an organization called ‘Horizons for the Blind,’ which translates written material into Braille and produces large print material for blind or low vision customers. This service may be offered to visually impaired customers requesting to receive future monthly bills in Braille or large print.

<sup>117/</sup> FCC, *Genachowski and Copps Present AAA Awards* (Oct. 28, 2011), available at <http://www.fcc.gov/document/genachowski-and-copps-present-aaa-awards>; CTIA, *CTIA Statement After AccessWireless.Org Received FCC Chairman’s Award for Advancement in Accessibility* (Oct. 28, 2011), available at <http://blog.ctia.org/2011/10/28/ctia-statement-on-accesswireless-org/>.

2013 National Access Award, given to an organization or individual who has provided improved communication access for people with hearing loss.<sup>118/</sup>

Last year, Sprint was named Disability Matters Marketplace Winner for Innovative Accessibility Solutions at the U.S. Disability Matters Awards, in recognition of the company's innovative accessibility-themed ID packs.<sup>119/</sup> Just recently, AT&T was awarded the Helen Keller Achievement Award from AFB "for an exceptional track record of providing accessible products and services that improve the lives of people with vision loss."<sup>120/</sup> This award follows on the tail of a variety of other recognitions and awards received by the company in 2013, including the 2013 AFB Access Award,<sup>121/</sup> the Disability Cinema Coalition's inaugural Malcolm J. Norwood Award for Inclusion Through Technology,<sup>122/</sup> and recognition by the Global Initiative for Inclusive Information and Communications Technology.<sup>123/</sup>

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<sup>118/</sup> BusinessWire, *CTIA-The Wireless Association to Receive Hearing Loss Association of America's National Access Award at Convention 2013* (June 4, 2013), available at <http://www.marketwatch.com/story/ctia-the-wireless-associationr-to-receive-hearing-loss-association-of-americasnational-access-award-at-convention-2013-2013-06-04>.

<sup>119/</sup> Sprint Press Release, *Sprint Named Disability Matters Marketplace Winner for Innovative Accessibility Solutions* (Mar. 18, 2013), available at [http://newsroom.sprint.com/article\\_display.cfm?article\\_id=2537](http://newsroom.sprint.com/article_display.cfm?article_id=2537). Sprint's ID packs accommodate various accessibility needs and allow users to, among other things, operate a smartphone without the need to see or read what is displayed on the screen and identify and locate items around the home and office. *Id.*

<sup>120/</sup> AFB Press Release, *American Foundation for the Blind Announces 2014 Helen Keller Achievement Awardees* (June 2, 2014), available at <http://www.afb.org/info/about-us/events-and-awards/helen-keller-achievement-awards/afb-announces-2014-helen-keller-achievement-awardees/1235>.

<sup>121/</sup> AFB Press Release, *American Foundation for the Blind Announces 2013 Access Award Winners* (Apr. 16, 2013), available at <http://www.afb.org/info/about-us/press-room/afb-announces-2013-access-award-winners/125>. The AFB Access Award honors individuals, corporations, and organizations that are eliminating or substantially reducing inequities faced by people who are blind or visually impaired.

<sup>122/</sup> Disability Cinema Coalition, *The Norwood Award for Inclusion Through Technology*, <http://disabilitycinemacoalition.weebly.com/awards.html> (last visited July 6, 2014). The Malcolm J. Norwood Award for Inclusion Through Technology is awarded based on a commitment to diversity, inclusion, and technological innovations that empower individuals with disabilities to follow their passions, including their passion for the Cinematic Arts.

<sup>123/</sup> In its white paper, "AT&T's Corporate Accessibility Technology Office: An Industry Model," G3ICT recognized AT&T as a company that is empowering seniors and people with disabilities by

### **III. THE WIRELESS INDUSTRY’S SUCCESSFUL COMPLIANCE WITH THE CVAA CAN BE SUPPORTED THROUGH CLEAR GUIDANCE, MORE SPECTRUM, AND “LIGHT TOUCH” REGULATORY POLICIES**

#### **A. CTIA Member Companies’ Success In Complying With The CVAA’s Requirements Is Enhanced By Collaboration With The Accessibility Community And Could Be Improved Through Further FCC Guidance.**

The FCC should recognize in its Biennial Report to Congress that the CVAA and good faith efforts of the wireless industry and accessibility community has resulted in collaborations that encourage the exchange of information about priorities, challenges, and issues. This collaboration allows the accessibility community to raise issues and voice concerns, and allows industry to understand and respond before individual disputes arise. Specifically, the Commission’s requirement that manufacturers and service providers provide contact information for persons within a company that are authorized to specifically address accessibility complaints has been a resounding success, encouraging and enabling this direct dialogue between the industry and the accessibility community.<sup>124/</sup> Not only have these interactions allowed the wireless industry to promptly address complaints as they arise, they have also enabled the accessibility community to proactively approach the wireless industry with their concerns *before* filing a formal complaint that diverts time and resources from the parties and the Commission. To foster this collaboration going forward, CTIA urges the Commission to recognize these good faith efforts and continue encouraging direct engagement between parties as the primary method of resolving issues.

CTIA also believes that the FCC could take several targeted measures that would improve covered entities’ ability to comply fully with the CVAA’s requirements. Promptly

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providing digital accessibility technology in the workplace and marketplace. *See* G3ICT Press Release, *AT&T’s Corporate Accessibility Technology Office Recognized by G3ICT, the Global Initiative for Inclusive ICTS* (Oct. 11, 2013), available at [http://g3ict.org/press/press\\_releases/press\\_release/p/id\\_73](http://g3ict.org/press/press_releases/press_release/p/id_73).

<sup>124/</sup> *See* 47 C.F.R. § 14.31.

resolving outstanding rulemakings and issues regarding accessibility, such as the meaning of the term “interoperable video conferencing,” would provide needed regulatory certainty so that companies can plan and provide for compliance.<sup>125/</sup> The Commission also could update and streamline its HAC reporting requirements by updating its form (FCC Form 655) to make it more user-friendly (*e.g.*, by allowing users to cut and paste information, identifying errors with specificity, and providing entities with copies of previous reports to avoid duplicative efforts) and could accelerate its review of the HAC reports.<sup>126/</sup>

**B. The Wireless Industry Is Complying With The CVAA’s Recordkeeping And Consultation Requirements, But Needs Further Clarity On The Rules.**

In developing its assessment of the recordkeeping and enforcement requirements and their impact on the development and deployment of new communications technologies,<sup>127/</sup> CTIA respectfully requests that the Commission recognize that the wireless industry’s approaches to meeting the recordkeeping and consultation requirements are as diverse and varied as the wireless industry itself – and that such diversity is both permissible and encouraged.

Means of compliance can vary greatly depending on corporate culture, size, and other factors. For example, some nationwide wireless service providers have established formal internal controls, including rigorous documentation requirements regarding accessibility and compatibility, to ensure that compliance with the FCC’s accessibility rules is incorporated into its product development process. Others, including regional wireless service providers and Original Equipment Manufacturers entering the U.S. wireless market, may learn from the

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<sup>125/</sup> See CTIA 2012 Comments at 20-21.

<sup>126/</sup> See Comments of CTIA–The Wireless Association, GN Docket No. 14-25, at 3 (filed Mar. 31, 2014).

<sup>127/</sup> See *Public Notice* ¶¶ 13-14.

accessibility and older adult communities primarily through CTIA's AccessWireless.org and AOI.<sup>128/</sup>

To facilitate compliance with existing rules by this diverse group of providers, additional guidance and clarity from the Commission would assist in these efforts. For instance, as CTIA previously suggested, the Commission should provide additional guidance that the types of records, processes, and efforts to engage the accessibility community that were previously described in these comments are compliant with its rules.<sup>129/</sup> In the absence of such guidance, the FCC should remain open to working with the industry to address any questions regarding the adequacy of the form or content of a covered entity's records.<sup>130/</sup> It should also remain flexible with respect to imposing any penalties if an entity's records are ultimately unexpectedly found to be insufficient or non-compliant. This clarity and flexibility will better assist industry in faithfully meeting its obligations under the CVAA.

**C. Spectrum, Infrastructure And "Light Touch" Regulatory Policies Are Critical To The Wireless Industry's Continued Efforts To Address Accessibility.**

The *Public Notice* seeks comment on accessibility barriers with respect to new communications technologies that are both within and outside the scope of the CVAA.<sup>131/</sup> For the wireless industry to better serve all consumers, including the accessibility community, the FCC should endeavor to adopt policies that make more spectrum available for commercial use, promote infrastructure deployment, and rely on the lightest touch regulatory scheme possible.

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<sup>128/</sup> See Laurie Ellington, *CTIA's Accessibility Outreach Initiative Hits the Ground Running* (July 26, 2013), available at [http://accesswireless.org/about-us/news/13-07-26/CTIA\\_s\\_Accessibility\\_Outreach\\_Initiative\\_Hits\\_the\\_Ground\\_Running.aspx](http://accesswireless.org/about-us/news/13-07-26/CTIA_s_Accessibility_Outreach_Initiative_Hits_the_Ground_Running.aspx).

<sup>129/</sup> See CTIA 2012 Comments at 19-20.

<sup>130/</sup> See *id.*

<sup>131/</sup> See *Public Notice* ¶ 12.

As CTIA has previously explained to the FCC, as well as to Congress and the Administration, spectrum is a vital resource for wireless carriers, and there is no substitute for licensed, exclusive-use spectrum.<sup>132/</sup> Consumers are undeniably and exponentially increasing their appetite for spectrum-intensive wireless data services, such as Internet and video, including deaf consumers who prefer to communicate through ASL over mobile video services and applications. As spectrum usage and demand continues to grow,<sup>133/</sup> the Commission, Congress, and the Administration can help the wireless industry meet the needs of the accessibility community by adopting spectrum policies that seek to allocate spectrum in bands suited for mobile broadband on a licensed basis, and provide opportunities for unlicensed use in bands that may not be suited or available for licensed use.<sup>134/</sup> The Commission should work with relevant stakeholders to incentivize federal agencies to relinquish their spectrum and repurpose that spectrum for commercial use.<sup>135/</sup>

In addition, the Commission can better serve the accessibility community by adopting policies that enable expedited wireless infrastructure deployment, including by exempting temporary towers from onerous registration requirements for emergency and non-emergency

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<sup>132/</sup> See, e.g., CTIA Spectrum Policy Comments at 12-13; Letter from Steve Largent, CTIA – The Wireless Association®, to Tom Power, Deputy Chief Technology Officer, Telecommunications, Office of Science and Technology Policy, at 1-2 (filed Mar. 20, 2014) (“CITA OSTP Comments”), available at [http://www.whitehouse.gov/sites/default/files/microsites/ostp/rfi\\_responses\\_-\\_fr\\_doc.\\_2014-03413\\_filed\\_2-14-14\\_all.pdf](http://www.whitehouse.gov/sites/default/files/microsites/ostp/rfi_responses_-_fr_doc._2014-03413_filed_2-14-14_all.pdf); Comments of CTIA–The Wireless Association®, GN Docket No. 12-354, at 6-10 (filed Feb. 20, 2013).

<sup>133/</sup> North America is projected to have the world’s fastest growth in mobile devices and connections with a 13 percent compound annual growth rate (“CAGR”) from 2012 to 2017. Mobile data traffic in the U.S. will be 687 times greater in 2017 than it was in 2007. See CTIA, Policy and Initiatives, <http://www.ctia.org/policy-initiatives/policy-topics/spectrum-tower-siting-and-antennas> (last visited July 11, 2014), citing Cisco, *Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2012–2017* (February 2013), available at [http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white\\_paper\\_c11-520862.html](http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-520862.html).

<sup>134/</sup> See CTIA Competition Policy Comments at 12-13.

<sup>135/</sup> See CTIA OSTP Comments at 3-6; CTIA Spectrum Policy Comments at 9-10.

reasons, and that enhance network resiliency and reliability. Expediting the wireless siting process would help carriers satisfy the demand for wireless broadband services consistent with Congress' direction to the Commission to "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to *all* Americans."<sup>136/</sup> Moreover, the Commission should enhance network resiliency and reliability by relying on voluntary "best practices" and avoiding unnecessary regulatory mandates,<sup>137/</sup> as such efforts will ensure that all consumers, including individuals with disabilities, have access to robust communications networks.

Innovation and progress are also best spurred by a flexible and predictable "light touch" regulatory framework that encourages competition, creativity, and collaboration among stakeholders. The current light touch approach to regulation has already allowed the wireless marketplace to flourish, benefitting all consumers in terms of expansive choice among high-quality services and devices at a variety of price points.<sup>138/</sup> In this same vein, CTIA appreciates and supports the flexible "achievability" standard included in the CVAA and Section 2 of the Communications Act that recognizes the roles of various entities throughout the wireless ecosystem to meeting accessibility requirements.<sup>139/</sup>

The Commission can further ensure the success of this framework by clarifying that it will consider, when conducting an achievability analysis, that a covered entity does not always have ultimate control over whether a particular component supports an accessibility feature. In

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<sup>136/</sup> See Comments of CTIA–The Wireless Association, WT Docket No. 13-238, *et al.*, at 2 (filed Feb. 3, 2014) (*emphasis added*).

<sup>137/</sup> See Comments of CTIA–The Wireless Association, PS Docket No. 13-239 and PS Docket No. 11-60 (filed Jan. 17, 2014).

<sup>138/</sup> See CTIA Competition Policy Comments at 2-7.

<sup>139/</sup> See 47 U.S.C. § 617; *see also* 47 U.S.C. § 255 (requiring that equipment and services be made accessible to and usable by individuals with disabilities, if readily achievable).

some cases, a covered entity's ability to address the accessibility of a particular service or product may be affected by the specifications, limitations, or modifications of non-covered entities throughout the wireless ecosystem. The Commission should consider this issue in the achievability analysis in order to recognize the limits of covered entities' abilities. This clarification would be consistent with the FCC's consideration of the circumstances of a particular product or service that renders a feature not achievable.<sup>140/</sup> In any case, the FCC's rules should not be interpreted in any manner that would stifle innovation.

Finally, the Commission should periodically evaluate its accessibility requirements to ensure that wireless providers' and equipment manufacturers' resources are placed where they are of most value to consumers. In particular, the Commission should consider whether certain accessibility regulations are outdated and ensure that resources are put to their highest and best use. For instance, the Commission should continue to evaluate the necessity of the wireless TTY requirement on a holistic basis. Despite the fact that TTY users have migrated to other text-based wireless communications,<sup>141/</sup> the FCC's rules continue to require Commercial Mobile

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<sup>140/</sup> See *Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010, et al.*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd. 14557, ¶ 129 (2011) (noting that "if an accessibility feature has been implemented for competing products or services, we find that such implementation may serve as evidence that implementation of the accessibility feature is achievable" but that "a covered entity may rebut such evidence by demonstrating that the circumstances of the product or service offered by that particular entity renders the feature not achievable").

<sup>141/</sup> See Emergency Access Advisory Committee ("EAAC"), *Report on TTY Transition*, at 11 (Mar. 2013), available at [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-319386A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-319386A1.pdf) ("2013 EAAC TTY Transition Report") ("There have been indications at the EAAC that there is some use of the wireless TTY solution. The general impression is however that the current wireless TTY solution with the TTY device attached to the wireless handset by a cable is very little used, much less than the regular wireline use."); see also *Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications; Framework for Next Generation 911 Deployment*, Further Notice of Proposed Rulemaking, 27 FCC Rcd. 15659, ¶ 110 (2012) ("*Text-to-911 FNPRM*"); Comments of CTIA-The Wireless Association, PS Docket Nos. 11-153, 10-255, at 14 (filed Mar. 11, 2013).

Radio Service providers to support TTY calls to 9-1-1.<sup>142/</sup> In light of the recent availability of text-based communications services that enable the deaf, hard of hearing, and speech impaired to reach PSAPs, the Commission appropriately sought comment in the *Text-to-911 FNPRM* on whether to continue mandating in the future that new wireless networks and handsets support a wireless TTY solution.<sup>143/</sup> Consistent with the CVAA and the 2013 EAAC TTY Transition Report,<sup>144/</sup> the Commission should take steps to transition TTY users to more efficient communication means by removing the requirement to support TTY on wireless services, especially for wireless service providers that support Text-to-911 on a voluntary basis.<sup>145/</sup>

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<sup>142/</sup> 47 C.F.R. § 20.18(c).

<sup>143/</sup> *Text-to-911 FNPRM* ¶¶ 110-113.

<sup>144/</sup> See CVAA § 106(c)(6) (codified at 47 U.S.C. § 615c(c)(6)); see also 2013 EAAC TTY Transition Report at 11.

<sup>145/</sup> See *supra*, Section II.A.

## CONCLUSION

The wireless industry has made and will continue to make substantial efforts to provide products and services that serve the needs of all Americans, including those with disabilities. CTIA and its member companies have worked hard to implement practices in compliance with the CVAA and they look forward to the continuation of the light touch regulatory framework the Commission has long provided and which has fostered an environment ripe for innovation and accessible wireless products and services.

Respectfully submitted,

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