



VIA ECFS

February 25, 2014

Marlene H. Dortch, Secretary
Office of the Secretary
Federal Communications Commission
445 12th Street, S.W.
TW-A325
Washington D.C. 20554

Re: Accessibility of User Interfaces, and Video Programming Guides and Menus [MB Docket No. 12-108] and Accessible Emergency Information, and Apparatus Requirements for Emergency Information and Video Description: Implementation of the Twenty-First century Communications and Video Accessibility Act of 2010 [MB Docket No. 12-107]

Dear Ms. Dortch:

Enclosed for filing in the above referenced Further Notice of Proposed Rulemaking are reply comments of the Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC).

Should you have any questions concerning this filing, please do not hesitate to contact me via email at helena.mitchell@cacp.gatech.edu.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "H Mitchell".

Helena Mitchell
Principal Investigator, Wireless RERC
Center for Advanced Communications Policy
Georgia Institute of Technology

Enclosure

**Before the
Federal Communications Commission
Washington, D.C., 20554**

In the matter of)	
)	
Accessibility of User Interfaces, and)	MB Docket No. 12-108
Video Programming Guides and Menus)	
)	
Accessible Emergency Information,)	MB Docket No. 12-107
and Apparatus Requirements for Emergency)	
Information and Video Description:)	
Implementation of the Twenty-First Century)	
Communications and Video Accessibility)	
Act of 2010)	

COMMENTS OF
REHABILITATION ENGINEERING RESEARCH CENTER FOR
WIRELESS TECHNOLOGIES (WIRELESS RERC)

INTRODUCTION

The Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC) hereby submits reply comments to the above-referenced Further Notice of Proposed Rulemaking, released on October 31, 2013. The Wireless RERC¹ mission is to research, evaluate and develop innovative wireless technologies and products that meet the needs, enhance independence and improve the quality of life and community participation of people with disabilities. As such, we commend the FCC's efforts to promulgate rules to guide the implementation of provisions of the *Twenty First Century Communications and Video Accessibility Act of 2010* (CVAA). Specifically, in these procedures, rules aimed at ensuring people with disabilities have accessible and usable user interfaces and video programming guides and menus.

¹ The Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC) is sponsored by the National Institute on Disability and Rehabilitation Research (NIDRR) of the U.S. Department of Education under grant number H133E110002. The opinions contained in this filing are those of the authors and do not necessarily reflect those of the U.S. Department of Education or NIDRR.

Among the Wireless RERC's policy research, consumer research and development projects are a focus on emergency lifelines for people with disabilities. This includes addressing how communications can be inclusive of people with disabilities. We have conducted on-line surveys, field trials and focus groups with people with disabilities that gather qualitative and quantitative data on the user's experience with receiving and reacting to public alerts and the technologies they use to do so. The Wireless RERC's recently concluded survey *Emergency Communications and People with Disabilities* indicated that people with disabilities utilize multiple methods to receive all forms of information.² This included legacy technologies such as sirens, traditional television and the radio, as well as next-generation alerting technologies such as mobile alerts and social media. Therefore, we are pleased with the Commission's advancement of rules regarding the accessibility of user interfaces, video programming guides and menus, and emergency information.

The comments respectfully submitted below are based on subject matter expertise developed over the 13 years of the Wireless RERC's existence. Findings from our consumer and policy research and development efforts inform the recommendations made herein.

Reply to comments filed by Verizon and Verizon Wireless.

138. Usability Requirements: As indicated in the Commission's definition of usable, usability goes beyond using the technology itself, it includes the ability to access information and services pertaining to the technology that are provided by the vendor and/or manufacturer of the technology. In the experience of the Wireless RERC,

² Morris, J, LaForce S., Mueller, J. (2013). *Social Media, Public Emergencies & Disability*. CSUN 2013 28th Annual International Technology and Persons with Disabilities Conference, San Diego, CA, February 28, 2013. Available at <http://b.gatech.edu/14W0f4W>.

many months, even years. This indicates that while accessibility features are present, the

e agree with Verizon's

concurrence with the Commission to apply usability "standards in the context of Section 204³"

and urge the Commission to adopt the term usable as defined in Section 6.3(1). This will

provide consistency in the rules and leave little doubt in what the Commission means by usable.

Reply to comments filed by the Consumer Groups and Telecom RERC.

139. Information, documentation and training requirements. We recommend that the Commission should, "... impose information, documentation, and training requirements consistent with the requirements set forth in Section 6.11 of [Commission] rules for purposes of implementing Sections 204 and 205 of the CVAA." Again this provides consistency for industry as it relates to the delivery of such training and information to people with disabilities and the general public. The Consumer Groups and Telecom RERC recommend four methods of notification for people with hearing loss⁴. The Wireless RERC agrees and hereby extends the applicability of their Internet and customer service suggestions to people with vision loss. It is our recommendation that electronic documents used for information, documentation and training are accessible to screen readers and other assistive technology used by people with vision disabilities.

The Wireless RERC would like to further elaborate that customer service is central to

³ Comments of Verizon and Verizon Wireless, Docket No. 12-108 and 12-107, p. 2. February 18, 2014.

⁴ Comments of Consumer Groups and Telecom RERC, Docket No 12-108 and 12-107, pp. 11-13. February 18, 2014.

providing information to people who have vision loss, as oftentimes the online and print information is not consistently accessible. Throughout the course of the Wireless RERC's research with the disability community, a recurrent question from many people with vision loss concerned accessing secondary audio channels and video descriptions. This question was posed to us despite the fact that the research being conducted was unrelated (or tangentially, at best) to video programming. Often, discussion centered on the inability of customer service to resolve their issues. The common theme was that customer support agents simply did not have the required expertise to address specific inquiries made by people with disabilities, hence support was inadequate. These instances are representative of the frustration felt by people with vision loss regarding the insufficient knowledge on accessibility features and deficient technical assistance provided by manufacturers and service providers. This mirrors the Consumer Groups and Telecomm RERC's statement that "Too often have deaf and hard of hearing customers reached out to customer service representatives asking how to access closed captioning features on products and encountered puzzled customer service representatives."⁵ The accessibility of the devices, equipment and services should be conceived as a continuum that includes the technology itself and any support for using/accessing the technology.

143. Mechanism for Activating Other Accessibility Features: *"...should the first level menu include a means of generally accessing "accessibility features, which could then guide consumers to various features including closed captioning display settings, as well as any information about built-in or the peripheral provision of audible output for on-screen text menus..."* The Wireless RERC agrees with the Consumer Groups and Telecom RERC's

⁵ Comments of Consumer Groups and Telecom RERC, Docket No 12-108 and 12-107, p. 13. February 18, 2014.

statement that “Although the Commission has the authority under the CVAA to require that closed captioning display settings be accessible through a button or similar feature, we believe that these accessibility features should be easily available in the first level of the menu.”⁶ In support of this, we maintain prior recommendations put forth in reply comments submitted in the NPRM. For ease of reference they are repeated below. However, we acknowledge and concur with the Consumer Groups and Telecom RERC when they stated that “...it is important to distinguish between placing closed captioning display settings in the first level of a menu and the requirement of a button to activate closed captioning.”⁷ People requiring closed captions may, at times, need to quickly turn them on or off,⁸ so the minimal step accessibility activation and configuration recommended below does not supplant the need for a single step activation/deactivation of closed captions.

Reaffirmation of Wireless RERC reply comments⁹ filed in the NPRM *Accessibility of User Interfaces, and Video Programming Guides and Menus.*

AT&T is concerned that this single step process could reduce the ability of covered entities to provide simplified access to closed captioning through innovative means...although Section 205 does not address video description on navigation devices, a covered entity may nevertheless seek to deploy an interface mechanism that allows the user to select video description as well as closed captioning...such an interface mechanism may take more than a single step, but it may be the most effective way for the covered entity to simplify access to all

⁶ Comments of Consumer Groups and Telecom RERC, Docket No 12-108 and 12-107, p. 7. February 18, 2014.

⁷ Comments of Consumer Groups and Telecom RERC, Docket No 12-108 and 12-107, p. 8. February 18, 2014.

⁸ Comments of Consumer Groups and Telecom RERC, Docket No 12-108 and 12-107, p. 10. February 18, 2014.

⁹ Wireless RERC. (2013). Reply Comments filed in response to *Accessibility of User Interfaces, and Video Programming Guides and Menus* [MB Docket No. 12-108]. Federal Communications Commission: Washington, DC, August 2, 2013.

accessibility features...¹⁰” The Wireless RERC concurs. In order to streamline the activation of closed captioning, video description, other accessibility features and the configuration of all, a minimal step *accessibility* button, key and/or icon should be included on navigation devices and integrated in onscreen software; a single step to open accessibility features menu and secondary selection to turn the feature on or off. An example of how it could work is below:

One access button pulls up accessibility options:

1. CC (closed captioning)
 - a. On/off
 - i. If “on” is selected, configuration options appear.
2. VD (video description)
 - a. On/off
 - i. If “on” is selected, configuration options appear.
3. Other access features

The essential characteristic is that the accessibility button, key or icon be in a conspicuous place and not buried amongst configuration menus. To that end, the Wireless RERC agrees with some of the language recommend by the Consumer Groups and Telecom-RERC but believes that is should be modified to include all access features and account for the need to initiate *and* activate. Accessibility features should “...be activated ...from all of the same locations from which the volume can be adjusted..., and if the device or apparatus lacks a volume control, then the control should be activated...from all of the same locations from where primary functions are located.”¹¹

¹⁰ Comments of AT&T in Docket No. 12-108, p. 16.

¹¹ Comments of Consumer Groups and the Telecom-RERC in Docket No. 12-108, p.9.

Allowing a minimal step approach would allay AT&T's concerns regarding confirmations. According to AT&T, imposing "a single step process could cause manufacturers to eliminate confirmations (i.e. feedback)...Eliminating confirmations could cause confusion for users of navigation devices by invoking the selected change before they understand the import of the selection."¹² Additionally, positioning all of the accessibility features on the same menu would improve visibility of all the access features that may be applicable to users. One cannot presume that people with vision loss will not need closed caption or vice versa. Co-locating all of the accessibility features would be practical for users and manufactures alike. [End of reaffirmation of Wireless RERC reply comments.]

Reply to comments filed by the National Cable and Telecommunications Association (NCTA).

145. Accessing Secondary Audio Stream for Emergency Information: According to the NTCA, "The Further Notice also asks whether to require the provision of a similar [one button] "mechanism" to enable individuals who are blind or visually impaired to access emergency information that may be contained in a secondary audio stream. However, the CVAA fails to provide such authority."¹³ The Wireless RERC believes the Commission does have the authority to require that, "...individuals who are blind or visually impaired ... be able to access the secondary audio stream to obtain audible emergency information in a simple, straightforward, and timely manner." If the authority is not in Section 303(u)(1)(C), then it is in the Commission's basic mission to provide for the safety of life and property of Americans.

¹² Comments of AT&T in Docket No. 12-108, p. 16

¹³ Comments of NCTA Docket No 12-108 and 12-107, p. 6. February 18, 2014.

We strongly urge the Commission "...to require manufacturers of apparatus covered by Section 203 of the CVAA to provide access to the secondary audio stream used for audible emergency information by a mechanism reasonably comparable to a button, key, or icon." This can be a life and death scenario where people with vision disabilities would miss information that affects their immediate safety. In an effort to maintain the "whole community" framework of the emergency management community per FEMA, it is important that regardless of the channel used to distribute emergency communications information; the message be accessible to all citizens. Information currently provided in picture format and/or text crawl alone is ineffective to those of who are blind or have low vision. Without the capability to receive proper emergency information these segments of our population would not be adequately prepared and would unnecessarily suffer in cases of any subsequent evacuation or shelter-in-place order. As discussed above, having a centrally located accessibility button or icon that when selected provides a list of accessibility features, including the secondary audio stream would increase the usability of the accessibility features. Again, it is important to note that people with disabilities are a diverse population. Oftentimes one individual can have more than one disability and thus need to employ more than one type of accessibility feature. As per research conducted by the Resource Center for Independent Living, 46% of people with disabilities identify as having more than one disability.¹⁴ Furthermore, other members in the household may have different access needs. In recent data collected by the Wireless RERC, preliminary analysis revealed that 24% of respondents with a disability were also caregivers of a person with a disability¹⁵ signifying that one household may need to accommodate more than one type of disability.

¹⁴ Resource Center for Independent Living. (2014) *Disability Facts & Statistics*. Available at <http://www.rcil.com/disabilityfacts.cfm>.

¹⁵ Wireless RERC (2013). Preliminary findings of the 2013-2014 Wireless Emergency Alerts (WEA) Survey (unpublished).

Reply to section not addressed by stakeholder comments.

147. Timeframe. In reviewing the comments filed in this proceeding by industry and consumer stakeholders alike, the Wireless RERC noticed the absence of comments concerning the time frames and deadlines. The Wireless RERC believes that “Yes” the deadlines should be consistent where the Commission stated, “Should the deadline be consistent with the deadline for compliance with Section 203 apparatus requirements that we adopted in the *Emergency Information/Video Description Order*?” The Wireless RERC believes that any extensions that the Commission may grant should be granted very judiciously in light of the proliferation of the devices receiving the information and the increasing use of the information itself. This includes the granting of any waivers of the newly adopted regulation. The Wireless RERC agrees with the FCC’s assertion that “Although the compliance deadline is three years away we expect manufacturers to take accessibility into consideration as early as possible during the design process for new and existing equipment and to begin taking steps to bring accessible equipment to consumers as required by our rules¹⁶” We strongly recommend that it not go beyond those deadlines because of the potential perilous positions delays in implementation places people with disabilities in during emergencies.

Implementation of the rules cannot proceed quickly enough. Our populace is ageing at an increasing rate. The Department of Health and Human Services Administration on Ageing has stated that, “The United States older population (persons 65 years or older) numbered 39.6 million in 2009 (the latest year for which data is available). They represented 12.9% of the U.S.

¹⁶ FCC (2013). *Report and Order Accessibility of User Interfaces, and Video Programming Guides and Menus* [MB Docket No. 12-107 and 12-108]. Federal Communications Commission: Washington, DC, October 31, 2013., pp. 71-72.

population, about one in every eight Americans. By 2030, there will be about 72.1 million older persons, more than twice their number in 2000. People 65+ represented 12.4% of the population in the year 2000 but are expected to grow to be 19% of the population by 2030.”¹⁷ As we age, the likelihood of our having a disability increases.¹⁸

In closing, the Wireless RERC wishes to emphasize the importance of including accommodations for people with disabilities to the greatest extent possible. Television is arguably the most ubiquitous of currently deployed media technologies in the United States, yet people with disabilities, specifically those with hearing and vision loss have enjoyed only limited access since it first debuted in 1939. Seventy five years later, in 2014, full access is yet to be achieved. Hence, the Wireless RERC supports an emphatic advancement of rules that will realize parity of access of video programming and televised emergency information.

Respectfully submitted,



¹⁷ Administration on Aging (ND). Aging statistics.

[http://www.aoa.gov/AoARoot/\(S\(2ch3qw55k1qylo45dbihar2u\)\)/Aging_Statistics/index.aspx](http://www.aoa.gov/AoARoot/(S(2ch3qw55k1qylo45dbihar2u))/Aging_Statistics/index.aspx)

¹⁸ U.S. Department of Health & Human Services (2014). Webpage - Office on Disability.

http://www.hhs.gov/od/about/fact_sheets/whatisdisability.html.