

APPENDIX F**The IT and Telecom RERCs Proposal regarding Accessibility of Information Content****1) Not Impede or Impair**

A critical element of the Act is that carriers and product or service providers not impede or impair accessibility through the implementation of their products or services. This is expressed in different ways in the Act but it is useful to create a single concept since the form and format of technologies is changing so rapidly.

The concept of "shall not impede or impair accessibility" would capture succinctly the different concepts or issues that have been identified.

"Shall not impede or impair accessibility or accessibility related information" would cover

- o shall not strip off accessibility information (for example captions or video description, etc) that are present [in media or video-conference information]
- o shall not install equipment or features that can't or don't support accessibility information
 - e.g. equipment or features are not installed that are incapable of supporting any accessibility related content that is present or transmitted across the network.
- o shall not configure network equipment such that it would block or discard accessibility information
 - e.g. on a SIP-based VoIP call that includes text in parallel with voice, the gateways, firewalls, routers, etc are not configured to pass the voice stream but block or drop the text stream.
- o shall convey any accessibility related information that is present in an industry recognized standard format
 - e.g. if captions are included with video (in a standard way) they must not be stripped off purposefully or accidentally during storage
- o shall display any accessibility related information that is present in an industry recognized standard format
 - e.g. if captions are included with video (in a standard way) it must be possible to display them. They can be always displayed, or they can be displayed on request - but they must not be suppressed or inaccessible.
- o shall not block users from substituting accessible versions of content

- e.g. a video conferencing service/product would not prevent a user from substituting an accessible video in place of an inaccessible version displayed as part of a video-conferencing presentation. For example a version of the video with embedded sign language interpretation obtained from another source or created from the original source by a service that adds the embedded sign language interpreter could be substituted for the original video.
- o shall not prevent the incorporation or passing along of accessibility related information
 - e.g. authoring tools must allow authors to include accessibility information they have (for example captions) with regular information (for example audio-video information) so they can be sent together.

"Shall not impede or impair" would not include, or imply, a requirement to ADD accessibility information - only to "not impede or impair" the integrity, incorporation, or use of accessibility related information/content that is present and/or desired to be conveyed.

APPENDIX G**The IT and Telecom RERCs Proposal regarding Performance Objectives****Aspirational Goal****and****Testable Functional Performance Criteria***The Goal*

That all functionality of an ACS be accessible to people regardless of their abilities or disabilities, including but not limited to people who:

- have low vision or are blind
- have a colorblindness
- are hard of hearing or are deaf
- have impaired speech or are unable to speak
- have limited or no tactile sensitivity
- have limited or no reach, limited or no strength, or limited or no ability to manipulate
- have cognitive, language, or learning disabilities
- have seizure disorders
- have any combination of the above

Testable Performance Criteria

(1) Input, control, and mechanical functions sufficient to achieve all product functionality shall be locatable, identifiable, and operable in accordance with each of the following, assessed independently:

NOTE: Testing can be done with assistive technologies where available to users.

- (i) **Operable without vision.** ACS shall provide at least one mode that does not require user vision.

- A sufficient test would be that typical target users, with no prior knowledge of the product, can use it for the first time while blindfolded (unless they are already totally blind), using only standard documentation. Assistive technologies, or existing peripheral devices, or specialized customer premises equipment commonly used by individuals with disabilities to achieve access, that are available to users of this product can be used as part of the test. Test subjects can be trained in the use

of the access technology before the test - but not with the product being tested.

- (ii) **Operable with low vision and limited or no hearing.** ACS shall provide at least one mode that permits operation by users with visual acuity between 20/70 and 20/200, without relying on audio output.

■ A sufficient test would be that typical target users with no prior knowledge of the product can use it for the first time while using a device that makes the product visually appear to be at least 3.5 times the typical viewing distance from the user. Assistive technologies available to users of this product can be used as part of the test. Test subjects can be trained in use of the assistive technology before the test - but not with the product being tested.

- (iii) **Operable with little or no color perception.** ACS shall provide at least one mode that does not require user color perception.

■ A sufficient test would be that typical target users with no prior knowledge of the product can use it for the first time while viewing the product through a black and white monitor. Assistive technologies available to users of this product can be used as part of the test. Test subjects can be trained in use of the assistive technology before the test - but not with the product being tested.

- (iv) **Operable without hearing.** ACS shall provide at least one mode that does not require user auditory perception.

■ A sufficient test would be that typical target users with no prior knowledge of the product can use it for the first time while (unless they are already totally deaf) wearing a set of white-noise headsets that prevent hearing of any product sounds, including any natural mechanical sounds from the product, using only standard documentation. Assistive technologies available to users of this product can be used as part of the test. Test subjects can be trained in use of the assistive technology before the test - but not with the product being tested.

- (v) **Operable with limited manual dexterity.** ACS shall provide at least one mode that does not require gestures, pinching, twisting of the wrist, tight grasping, or simultaneous actions.

■ A sufficient test would be that typical target users with no prior knowledge of the product can use it for the first time while using only a 1/4 inch dowel, 12 inches in length, held only within the first 1 inch at the far end from the product. For this provision the dowel can be conductive. Assistive technologies available to users of this product can be used as part of the test. Test subjects can be trained in use of the assistive technology before the test - but not with the product being tested.

- (vi) **Operable with limited reach and strength.** ACS shall provide at least one mode that is operable within ADAAG limits for user reach and strength.

■ A sufficient test would be a test that controls needed to access full functionality are within reach (as defined by the reach limits in the current ADAAG for installed or

stand alone products) and operable with less than 5 pounds (22.2N) of force in both parallel and perpendicular directions.

(vii) **Operable with a Prosthetic Device.** Controls shall be operable without requiring body contact or close body proximity.

- A sufficient test would be that typical target users with no prior knowledge of the product can use it for the first time while using a 12 inch non-conducting wooden dowel held at the far end of the dowel from the screen. Assistive technologies available to users of this product can be used as part of the test. Test subjects can be trained in use of the assistive technology before the test - but not with the product being tested.

(viii) **Operable without speech.** ACS shall provide at least one mode that does not require user speech.

- A sufficient test would be that typical target users with no prior knowledge of the product can use it for the first time without using speech.

(ix) **Operable without reading ability.** ACS shall provide at least one mode that does not require any reading ability.

- A sufficient test would be that typical target users with no prior knowledge of the product can use it for the first time while all text on the product and its displays has been covered or replaced using a font where the characters all look alike (e.g. all letters are changed to visually be the letter "k" - though they retain their ASCII or UNICODE value so they can be read by assistive technologies). Assistive technologies available to users of this product can be used as part of the test. Test subjects can be trained in use of the assistive technology before the test - but not with the product being tested.

(x) **Operable without time dependent controls.** ACS shall provide at least one mode that does not require a response time of less than 10 times the average user response time unless the time limit is a required part of a real-time event (for example, an auction), and no alternative to the time limit is possible; or the time limit is essential and extending it would invalidate the activity; or the time limit is longer than 20 hours.

- A sufficient test would be that typical target users with no prior knowledge of the product, for each time limit that is set by the product, can turn off the time limit before encountering it; or can adjust the time limit before encountering it over a wide range that is at least ten times the length of the default setting; or is warned before time expires and given at least 20 seconds (10 times an average user's response time) to extend the time limit with a simple action (for example, "press the space bar"), and the user is allowed to extend the time limit at least ten times.

(2) All information necessary to operate and use the product, including but not limited to, text, static or dynamic images, icons, labels, sounds, or incidental operating cues, shall comply with each of the following, assessed independently:

- (i) **Availability of visual information.** ACS shall provide visual information through at least one

mode in auditory form.

- (ii) **Availability of visual information for low vision users.** ACS shall provide visual information through at least one mode to users with visual acuity between 20/70 and 20/200 without relying on audio.
 - A sufficient test would be that typical target users with no prior knowledge of the information can read it while using a device that makes the information visually appear to be at least 3.5 times the typical viewing distance from the user. Assistive technologies available to users of this information can be used as part of the test. Test subjects can be trained in use of the assistive technology before the test - but not with this information.
- (iii) **Availability of visual information for users with little or no color perception.** ACS shall provide visual information through at least one mode to users with visual acuity between 20/70 and 20/200 without relying on audio.
 - A sufficient test would be that typical target users with no prior knowledge of the information can use it for the first time while viewing the information through a black and white monitor. Assistive technologies available to users of this information can be used as part of the test. Test subjects can be trained in use of the assistive technology before the test - but not with this information.
- (iv) **Access to moving text.** ACS shall provide moving text in at least one static presentation mode at the option of the user.
- (v) **Availability of auditory information.** ACS shall provide auditory information through at least one mode in visual form or, if an alert, in visual or simple vibratory form.
- (vi) **Availability of auditory information for people who are hard of hearing.** Where understanding of speech is required for the use of ACS which has user controls, ACS shall provide at least one mode that allows user control of volume by at least +15 dB over the default volume level unless the default level is already 80 dB SPL or greater, and provide the user with the ability to freely connect alternative audio devices through an industry standard connection.

Prevention of visually induced seizures. ACS shall provide a mode where information displayed visually does not flash more than 3 times in any one second period unless it is below WCAG 2.0 General Flash and Red Flash Thresholds or equivalent.

Availability of audio cutoff. Where a product is intended for individual user operation and delivers audio output through an external speaker, ACS shall provide an industry standard connector for headphones or personal listening devices (e.g., phone like handset or earcup) which cuts off the speaker(s) when used.

Non interference with hearing technologies. Product that are held up to the ear during use shall provide one mode where interference with hearing technologies (including hearing aids, cochlear implants, and assistive listening devices) meets M2 or greater for ANSI C63.19-2007.

Note - this specifies a technical standard but is not a design guideline. It is a performance guideline that states what should be achieved but not what technique should be used to meet it.

Hearing aid coupling. Where a product delivers output by an audio transducer which is normally held up to the ear, ACS shall provide a means for effective wireless coupling to hearing aids [meeting standard Section 508 802.2.4 Wireless Adapter], a. **Note:** the Section 508 802.2.4 Wireless Adapter reads:

- i. **802.2.4 Wireless Adapter.** ICT not designed for use in a public location shall provide a wireless adapter that conforms to 802.2.4.1 through 802.2.4.3.
- ii. **802.2.4.1 Size and Battery Life.** The wireless adaptor shall have a similar size and battery life performance to the ICT for which it is provided,
- iii. **802.2.4.2 Without Assistance.** The wireless adaptor shall allow the user to pair the adapter to the product without assistance,
- iv. **802.2.4.3 Without Cable.** The wireless adaptor shall allow the user to pair the adapter to the product without requiring the user to plug in a cable for each use.

Provide Error Correction Assistance. When an error is detected and information for correction is known, this information shall be provided in a manner that meets the other functional performance provisions.

- a. E.g. detectably misspelled or miss-entered data, or invalid actions
- (xii) **Word/Phrase look-up.** ACS with keyboard and mouse or touchscreen shall provide a way for the user to look up the meaning of words or phrases.

(3) **Usable:** The term usable shall mean that individuals with disabilities have access to the full functionality and documentation for the product, including instructions, product information (including accessible feature information), documentation and technical support functionally equivalent to that provided to individuals without disabilities.

(4) **Compatible:** The term compatible shall mean compatible with peripheral devices and specialized customer premises equipment (equipment on the customer's person or premises), and in compliance with the following provisions, as applicable:

- (i) **External electronic access to all information and control mechanisms.** Information needed for the operation of products (including output, alerts, icons, on-line help, and documentation) shall be available in a standard electronic text format on a cross-industry standard connection and all input to and control of a product shall allow for real time operation by electronic text input into a cross-industry standard external connection and in cross-industry standard format. The cross-industry standard connection shall not require manipulation of a connector by the user.
- (ii) **Connection point for external audio processing devices.** Products providing auditory output shall provide

the auditory signal at a standard signal level through an industry standard connection.

- (iii) **Real-time text connectability.** Products that provide a function allowing voice communication and which do not themselves provide real-time text functionality shall provide a standard non-acoustic connection point for a real-time text device.
- a. If the ACS connects to the PSTN it shall use a TTY format that is supported by all other products and systems including emergency call centers. It shall also be possible for the user to easily turn any microphone on and off to allow the user to intermix speech with TTY use.
 - i. Note: the only TTY format supported universally in the US including emergency systems is TIA-825a
 - b. If the ACS connects to VoIP via SIP it shall use a RTT format that is supported by the largest number of products and systems or allow connection of a device that supports that format.
 - i. Note: At this time, the only RTT format that is widely used on VoIP via SIP and the only one named in emergency standards and guidelines is RFC 4103.
 - c. If the ACS connects to VoIP using any other transport standard it shall provide real-time text using the real-time text interoperability standard chosen for and supported by the largest number of products on that transport.
- (iv) **Real-time text signal compatibility.** Products, including those providing voice communication functionality, shall support use of all cross-manufacturer non-proprietary standard signals used by TTYs and other Real-time text formats..

**STATEMENT OF
CHAIRMAN JULIUS GENACHOWSKI**

Re: 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, CG Docket No. 10-213; Amendments to the Commission's Rules Implementing Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996, WT Docket No. 96-198; In the Matter of Accessible Mobile Phone Options for People who are Blind, Deaf-Blind, or Have Low Vision, CG Docket No. 10-145

Today, we are taking a major step forward in helping Americans with disabilities share in the promise of the broadband revolution. By adopting rules today to implement the Twenty-First Century Communications and Video Accessibility Act, the most significant disabilities legislation since passage of the Americans with Disabilities Act, we will enable individuals with disabilities to fully access the wide array of digital technologies that have done so much to improve Americans' quality of life. As our reliance on technological innovations driven by broadband continues to enhance the way we communicate, this Order will ensure that people with disabilities are not left behind; that they can compete for jobs, participate in online commerce, and engage in civic dialogue using the advanced communications technologies of today – and the technologies of tomorrow that haven't even been invented yet.

In this Order we have observed the balance that Congress struck in the Act - stimulating the development of accessibility solutions that will provide a new world of opportunities for people with disabilities and avoiding counterproductive burdens on product development. The rules we adopt today will promote innovation and investment in this important space and benefit millions of people with disabilities. I thank the staff and my colleagues for their continued dedication to making advanced communications services accessible to all Americans.

**STATEMENT OF
COMMISSIONER MICHAEL J. COPPS
APPROVING IN PART AND DISSENTING IN PART**

Re: 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, CG Docket No. 10-213; Amendments to the Commission's Rules Implementing Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996, WT Docket No. 96-198; In the Matter of Accessible Mobile Phone Options for People who are Blind, Deaf-Blind, or Have Low Vision, CG Docket No. 10-145

Last October, I was thrilled to watch the President sign into law the Twenty First Century Communications and Video Accessibility Act. Thanks to champions on Capitol Hill including Congressman Markey and Senators Pryor and Kerry, the most sweeping civil rights legislation since the Americans with Disabilities Act became the law of the land. The statute confers a great responsibility on the FCC to craft new rules to ensure that the 54 million Americans with disabilities have access to advanced communications services and equipment that are essential for participation in our society. Access to advanced communications services is no longer a luxury, it's a necessity.

Working with many disabilities communities has been one of the great joys of my time at the Commission. These advocates have helped me understand the magnitude and importance of the challenges faced by so many people with disabilities, but also to realize the opportunity we have to apply the wonders of new technologies to help overcome those challenges. Their tireless advocacy is another reason the CVAA is a reality.

There is much to commend about the Order and Further Notice of Proposed Rulemaking the Commission adopts today. In most ways, we have struck the right balance between accessibility requirements and industry flexibility that promotes continued innovation. In particular, I am pleased that the item adopts an interim exemption for small businesses with a definite sunset date that requires the Commission to revisit these definitions in a careful and measured way, based on a full record. Anything less could mean denying people with disabilities in more rural locations served by small providers the benefits of this empowering law. I am also pleased that, while we allow an appropriate amount of time for industry to comply with our new rules, we also make clear that the Commission's door is open to help consumers resolve accessibility problems in the interim.

I thank the Chairman and my fellow Commissioners for working together to greatly improve the process through which the Commission will deal with requests for waiver from the rules. On this point, the Order recognizes the need to process waiver requests in a timely manner, while giving Commission staff the time necessary to review the requests. This will, in my view, prove to be a critical piece of our implementation. I want to caution, though, that this is an area where the exception could swallow the rule if we're not diligent. The convergence of multiple services into single electronic devices is now the norm – for example, even gaming devices increasingly have functionality that looks like advanced communications services. As we work through these questions, we must be mindful of Congress' intent that people with disabilities have access to new technologies and services.

There is one area, however, where I cannot join in approving the item. I believe that section

716(a)(1) of the Act is clear that all software is subject to accessibility requirements. The Order instead finds the Act ambiguous on this point, and concludes that it's best to read this ambiguity to narrow the Act's accessibility reach. The Order says that much of the same software will be made accessible through a broader interpretation of section 716(b)(1), which governs service providers. Confused? So am I. When Congress said "software," I don't think it was ambiguous. Even if it were ambiguous, I think the better course, one more consistent with the goals of the Act, would be to interpret the ambiguity in favor of greater accessibility, rather than less. It's hard for me to understand why Congress would think that advanced communications software already loaded into a device should be accessible, but the same software bought separately, shouldn't. As a result, I must dissent from this part of the Order.

I want to again thank the Chairman and my fellow Commissioners for meaningful give-and-take as we worked through the legal and technical issues of this proceeding. I also thank the Wireless Telecommunications, Enforcement, and Consumer and Governmental Affairs bureaus for bringing us this item. I am pleased that, on balance, what we do today will bring advanced communications and expanded opportunities to people with disabilities. They have been waiting a long time – and we still have much work to do.

**STATEMENT OF
COMMISSIONER ROBERT M. McDOWELL**

Re: 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, CG Docket No. 10-213; Amendments to the Commission's Rules Implementing Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996, WT Docket No. 96-198; In the Matter of Accessible Mobile Phone Options for People who are Blind, Deaf-Blind, or Have Low Vision, CG Docket No. 10-145

I am pleased to support today's order implementing major provisions of the Twenty-First Century Communications and Video Accessibility Act. I also support the accompanying further notice of proposed rulemaking, which explores several related issues, including the small entity exemption, interoperable video conferencing services, and safe harbor technical standards, among others. We have created a flexible and sensible path forward whereby the 54 million Americans with disabilities will benefit from new Internet-based and digital advanced communications systems that have come to be essential in almost every aspect of life. At the same time, we have provided the certainty necessary for the innovators investing risk capital to continue to satisfy consumer demand with new products and services.

I applaud Chairman Genachowski and his team in achieving the balance sought by Congress as expressed in the statute. Completing this order and further notice was a collaborative effort of which we can all be proud. Thank you also to the folks in Wireless Telecommunications Bureau, the Consumer and Governmental Affairs Bureau, and the Enforcement Bureau for your time, energy and creativity.

**STATEMENT OF
COMMISSIONER MIGNON L. CLYBURN**

Re: 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, CG Docket No. 10-213; Amendments to the Commission's Rules Implementing Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996, WT Docket No. 96-198; In the Matter of Accessible Mobile Phone Options for People who are Blind, Deaf-Blind, or Have Low Vision, CG Docket No. 10-145

When Congress enacted the Twenty-First Century Communications and Video Accessibility Act of 2010, it sent three profound messages. First, as advanced communications services become more prevalent, we should no longer view them as luxuries, but as necessities. Second, the 54 million people living with disabilities in our Nation deserve greater access to these increasingly important services. Third, the communications industry must do more to promote accessibility to this community. The legislative history makes clear that a collaborative, bi-partisan effort was critical to the statute's enactment.

Congress properly directed the Commission to address a number of challenging implementation issues. Perhaps the most difficult one for me was whether we should interpret Section 716(a) of the CVAA to impose independent regulatory obligations on providers of software that the end user acquires separately from equipment used for advanced communications services. I see reasonable arguments on both sides of this issue. I voted to support the interpretation in the Report and Order for a few reasons. First, the interpretation we adopt for Section 716(b), with regard to the services that are covered under the CVAA, includes the services that advocates for people living with disabilities said should be covered. In fact, the Report and Order lists the specific services these advocates cited in a recent *ex parte* filing. In addition, the biennial review process the Act mandates will give us the opportunity to monitor the industry and determine, in the future, whether application of the CVAA's requirements directly to developers of consumer installed software is warranted. The dispute assistance and enforcement procedures we adopted should create the proper incentives for the industry to negotiate with advocates for the disabled community to promote greater accessibility of advanced communications services. I hope the industry and consumer advocates will approach any remaining disputes with the same collaborative energy that made the Act possible.

I commend Joel Gurin, Ruth Milkman, Rick Kaplan, Michele Ellison, and their talented staff members. They worked diligently, over the past year, to present us with an item that complies with both the language and spirit of the most significant accessibility legislation since the Americans with Disabilities Act.