

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554

In the Matter of)
)
Advanced Communications Provisions of the) CG Docket No. 10-213
Twenty-First Century Communications and)
Video Accessibility Act of 2010)

To: Consumer & Governmental Affairs Bureau
and Wireless Telecommunications Bureau

REPLY COMMENTS OF GOOGLE INC.

Google Inc. (“Google”) hereby submits its reply comments in response to the Public Notice¹ seeking comment on the advanced communication provisions of the Twenty-First Century Communications and Video Accessibility Act of 2010 (the “Accessibility Act”),² to be codified at Sections 716 and 718 of the Communications Act of 1934, as amended (the “Act”).³ These provisions generally require providers of advanced communications services (“ACS”) and manufacturers of equipment and software used with ACS to ensure that their ACS, equipment, and software will be accessible to and usable by persons with disabilities, unless not achievable.

¹ Public Notice, CG Docket No. 10-213, *Consumer & Governmental Affairs Bureau and Wireless Telecommunications Bureau Seek Comment on Advanced Communication Provisions of the Twenty-First Century Communications and Video Accessibility Act of 2010*, DA 10-2029 (Oct. 21, 2010). Unless otherwise noted, all Comments referred to in these Reply Comments were submitted on November 22, 2010 in CG Docket No. 10-213.

² Twenty-First Century Communications and Video Accessibility Act of 2010, Pub. L. No. 111-260, 124 Stat. 2751 (2010) (as codified in various sections of 47 U.S.C.); Amendment of Twenty-First Century Communications and Video Accessibility Act of 2010, Pub. L. 111-265, 124 Stat. 2795 (2010).

³ 47 U.S.C. §§ 716, 718.

INTRODUCTION

The Accessibility Act is a landmark legislative achievement that will help bridge the gap between current levels of accessibility for Americans with disabilities and new and evolving technologies. Google strongly supports the Commission's implementation of the Accessibility Act in a manner that best accomplishes Congress's intent to "ensure that individuals with disabilities are able to fully utilize communications services and equipment." We are particularly excited about the potential of the open Internet to contribute significantly to achieving Congress's goals and vision.

By contrast to many current adaptive technology solutions, the Web provides an open, generative platform that enables enormous differentiation and the opportunity to reduce barriers to access, and thereby achieve the goals of the Accessibility Act. By building on open interfaces, standards, and protocols, backed up by open source implementation of core platforms and frameworks, Google and numerous others are lowering and can continue to lower barriers to accessibility to equipment and services.

It is important that in implementing the Accessibility Act, the Commission recognizes the substantial ways in which the open Web can help contribute to meet, if not exceed, the Act's goals. We therefore urge the Commission to adopt a flexible approach that best promotes innovation, collaboration, and openness. Regulatory processes built around these principles are likely to lead to the development of the widest range of solutions for providing access to persons with disabilities.

I. OPENNESS LOWERS BARRIERS TO ACCESS

The Internet is a unique platform, engendering new opportunities for user access. Web-based offerings and cloud computing represent a new paradigm for assistive technologies. The defining characteristics of the Internet ecosystem – openness, innovation, generativity, and adaptability – make accessibility quite different in a Web-based world. Openness enables innovators to creatively solve accessibility problems, to update and improve upon prior solutions, and to widely and cost-effectively distribute their offerings. In contrast to many current adaptive technology solutions available to individuals with disabilities, which can be closed, proprietary offerings, the open Web provides enormous differentiation and the opportunity to lower barriers to access.

We believe Google’s approach to accessibility exemplifies these characteristics. We are motivated by our corporate mission statement – organizing the world’s information, and making it both accessible and useful – and our vision with respect to accessibility is driven first and foremost by our desire to bring more of the world’s information online. We have improved accessibility of information for everyone through a number of our products, including Google Search and YouTube. Our goal is to continue to work collaboratively to improve our offerings, and we are taking concrete steps to make technology more available to people with disabilities.

One particularly promising development is the use of open standards, interfaces, and protocols, backed up by open source implementation of our core platforms and frameworks, to address barriers to accessibility.⁴ Although legacy technology has made tremendous strides – for

⁴ For example, K9mail, a talking email application, uses the Google API to provide an accessible email client (*see* <http://code.google.com/p/k9mail>); the IDEAL Group applications work with the Android platform to help individuals with disabilities access information (*see* <http://accessibility-android.info/stats.htm>); and Audiobooks enables listening to crowd-sourced audio books in the public domain, read by volunteers (*see* T.V. Raman, Audio Books on Android – Thanks Librivox!, Eyes-Free

example, by helping blind users access personal devices such as PCs and mobile phones – the cost of such technology, in addition to other barriers, such as difficulty of use, limited availability of partner products, and need for expensive repairs, often has constrained its reach.⁵ Open sourcing accessibility technology allows others to build on, rather than reinvent, existing solutions. In some instances, for example, Google builds accessibility into the core of these platforms, as with the Android mobile operating system. This enables mobile application developers such as the creators of Facebook for Android, Yelp, Spiel, NPR News, and others to create accessibility-focused software applications without the cost and overhead associated with developing their own infrastructure. The user ultimately benefits from the lower costs and faster pace of innovation.⁶

Google also constantly seeks input from the development community and users on methods to improve our accessibility initiatives. We provide forums

Android Blog, May 18, 2010, available at <http://eyes-free.blogspot.com/2010/05/audio-books-on-android-thanks-librivox.html>).

⁵ As the Wireless Telecommunications Bureau’s Elizabeth Lyle recently observed, “assistive technologies used by people with disabilities – such as Braille displays, augmentative and alternative communication devices, and screen readers – are often very expensive, not interoperable with the latest technologies, and are difficult to find and repair.” Elizabeth Lyle, Special Counsel for Innovation, Wireless Telecommunications Bureau, *Lifted By the Cloud*, Reboot.FCC, Nov. 3, 2010, available at <http://reboot.fcc.gov/blog?entryId=946060>.

⁶ On previous generation mobile phones, the screen reader needed by a blind user cost at least \$400.00 – more than the phone itself. See, e.g., Kathleen Pierce, *Digital Empowerment*, Boston Globe, Nov. 26, 2010, available at http://www.boston.com/yourtown/newton/articles/2010/11/26/advances_in_mobile_technology_provide_the_blind_with_new_tools/; Jeffrey P. Bigham, Craig M. Prince, & Richard E. Ladner, *Addressing Performance and Security in a Screen Reading Web Application That Enables Accessibility Anywhere*, Web Engineering, July 2008, available at <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4577891&isnumber=4577855> (noting that “[t]hese mobile devices cost more than \$1,000 US when the cost for both the mobile device and the screen reader is combined, which many potential users cannot afford.”). Today, equivalent technology is bundled as part of the Android platform, and the cost of an Android phone for a blind user is no different than the cost to other end users. This is a significant step toward allowing those with disabilities to reap the benefits of technologies that are available to everyone else.

(accessible@googlegroups.com and eyes-free@googlegroups.com) for developers and others to discuss the use of our enabling infrastructure and APIs, as well as for users to raise questions. This provides us with opportunities to learn more about how to improve Google products and to bring to our attention the challenges experienced by users of our platforms and tools. We also publish announcements and seek feedback related to our accessibility efforts at a single site, <http://www.google.com/accessibility>.

The result of this approach is technology that is more accessible to everyone. As Google and numerous others bring more and more information online in formats that are indexable, searchable, and machine processable, we believe we can have a significant positive impact on the overall availability of information to all users, including those who require accessibility accommodations.⁷

⁷ Android supports many eyes-free functions created by Google and by third parties. See Charles Chen and T.V. Raman, *Announcing Eyes-Free Shell for Android*, Open Source at Google Blog, Apr. 1, 2009, available at <http://google-opensource.blogspot.com/2009/04/announcing-eyes-free-shell-for-android.html>; T.V. Raman, *Walking About With A Talking Android*, Eyes-Free Android Blog Oct. 8, 2010, available at <http://eyes-free.blogspot.com/2010/10/walking-about-with-talking-android.html>. Google Voice provides users with notification of voice mail along with a text transcript. Once a voice mail transcript is received, a screen reader can read the transcript to the user. See Stan Schroeder, *Google Voice Is Like Gmail for Voicemail*, Mashable.com, Mar. 12, 2009, available at <http://mashable.com/2009/03/12/google-voice/>. In addition, YouTube offers captions or subtitles for its videos, and leverages voice recognition technology to help users create captions. See *Captions and Subtitles*, available at http://www.youtube.com/t/captions_about, and *Happy Birthday Automatic Captions*, available at <http://youtube-global.blogspot.com/2010/11/happy-birthday-automatic-captions.html>.

II. THE FCC SHOULD TAKE A FLEXIBLE, COLLABORATIVE, AND BENCHMARK-DRIVEN APPROACH TO IMPLEMENTING THE ACCESSIBILITY ACT

As discussed above, the openness of the Internet ecosystem transforms the nature of user accessibility. Section 255 of the Act, enacted as part of the Telecommunications Act of 1996, focused primarily on traditional voice telephony services and accessibility to a single, largely homogeneous service. The Internet and Web-based services coming within the ambit of the new advanced communications provisions of the Act, however, could not be more different. For these reasons, we believe that in implementing Sections 716 and 718 the Commission should take a flexible approach that promotes innovation, collaboration, and openness.

In adopting its implementing rules and policies, the Commission should strive to set clear goals and objectives, and then allow all stakeholders to work toward open, creative, and flexible solutions. Doing so will lead to greater participation by all stakeholders, across many industries and interest groups, many of whom have no significant history of participation in traditional telecom standards-setting bodies or accessibility groups. Setting baseline standards will enable all parties to have a better understanding of what the rules are intended to achieve by allowing providers of technology to know what they need to do to comply with the law, and the community of persons with disabilities to know what to expect.⁸

To encourage innovation, baseline accessibility standards should serve as a floor and should not be too rigid. Consistent with Congress's understanding that accessibility in advanced communications products and services will best be achieved by flexible standards and

⁸ See, e.g., Comments of the Information Technology and Industry Council at 8 (“The challenge for the Commission will be to ensure that any performance objectives remain realistic and attainable while still challenging industry to develop and deploy innovative accessibility solutions.”); Comments of CTIA - The Wireless Association at 10 (“To be useful, these performance objectives, prospective guidelines, and any safe harbors must be clear and understandable.”).

guidelines,⁹ the Commission therefore should not compel a particular business model or require the use of particular proprietary technologies.¹⁰

Implementation also should promote broad collaboration among stakeholders. Some commenters have suggested that the Commission rely on industry groups to discern the scope and details of its implementing regulations.¹¹ While industry experts can and should be a significant resource, the Commission should cast a wide net and seek input from a broad set of stakeholders and constituents, consistent with Congress's intent. For example, the Emergency Access Advisory Committee must include experts not only from industry but also from State and local governments and emergency response providers, national organizations representing individuals with disabilities and senior citizens, and Federal agencies responsible for implementing the Next Generation E-911 systems.¹² Similarly, the Video Programming and Emergency Access Advisory Committee will include representatives from video programming distributors and providers; vendors, developers, and manufacturers of systems, facilities, equipment, and capabilities for the provision of video programming delivered using IP;

⁹ See House Report H.R. Doc. No. 111-563 (2010) (“*Accessibility Act Legislative History*”), at 29 (“For each of these obligations, the Committee intends that the Commission afford manufacturers and service providers as much flexibility as possible, so long as each does everything that is achievable in accordance with the achievability factors.”).

¹⁰ See, e.g., Comments of the Telecommunications Industry Association at 3 (legislative history explains that Congress “intend[ed] that the Commission afford manufacturers and service providers as much flexibility as possible, so long as each does everything that is achievable,” citing *Accessibility Act Legislative History* at 24).

¹¹ See, e.g., Comments of Convo Communications, LLC at 4 (suggesting the Commission “encourage or force the creation of a working group of industry leaders” to agree on video conferencing interconnection standards).

¹² Accessibility Act, §§ 106(a), (b).

manufacturers; video programming producers; national organizations representing accessibility advocates; and the broadcast television industry.¹³

We believe the composition of the advisory committees reflects Congressional concern that a purely “industry led” effort would be too narrow in focus, and that a wider and more diverse range of participants should contribute to implementation efforts. At this early stage, when the Advisory Committees have not yet developed their recommendations, and when it is critical that the Commission set clear goals and objectives leading to effective baseline standards, it would be premature to rely on a narrow, industry-only panel of experts to guide implementation of performance objectives, safe harbors, achievability, and other provisions of Sections 716 and 718.

In sum, the Commission should recognize that open, generative platforms like the Internet allow for more widespread and faster evolution of product development and improvement. This is particularly the case in contrast to a more walled garden environment. The Commission’s implementing rules and guidelines therefore should anticipate that the open Web will drive new and innovative solutions, and that the business models and objectives of service providers and manufacturers will differ from one another based on their desire to serve the different needs of users.¹⁴

¹³ Accessibility Act §§ 201(a), (b).

¹⁴ Whereas Section 255 imposed regulatory obligations only on the telecommunications services industry, a far greater and more diverse number of groups including network operators, applications providers, and software developers will be affected by the advanced communications requirements of the Accessibility Act. The Commission should promote the innovation of these Internet-centric groups, who are developing new services and applications at the edge of the network.

CONCLUSION

A regulatory process built around openness and collaborative principles is most likely to lead to effective and comprehensive access to advanced communications by persons with disabilities. Web-based initiatives can contribute significantly to the achievements that will be realized by the Commission's implementation of the Accessibility Act. Google looks forward to ongoing participation with the agency and other stakeholders.

Respectfully submitted,



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