

Comments of the
American Foundation for the Blind
Before the
Federal Communications Commission
In the matter of
CG Docket No. 10-145
Assessment of Barriers to Accessible Mobile Technology
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The American Foundation for the Blind (AFB) is pleased to offer these initial comments in response to the Commission's invitation to describe the current experiences of individuals with disabilities regarding telecommunications equipment and service accessibility. Founded in 1921, AFB is the leading national nonprofit to which Helen Keller devoted more than four decades of her extraordinary life. AFB's mission to expand possibilities for people with vision loss is achieved through the public policy process, publishing landmark texts in the vision loss field, and comprehensive information and referral to people with vision loss and their families and friends.

AFB devotes substantial resources to the evaluation of the accessibility of mobile technology. Additionally AFB attempts to track the market in order to provide current information to individuals with vision loss as well as government and industry. We are pleased to provide the following analysis of accessibility of this vitally important technology in response to the Federal Communications Commission inquiry.

Overview

Amid the vast array of advanced mobile technology available to the general public, the landscape of accessible mobile devices which can be used by the nation's blind and visually impaired citizens is bleak. To date, only one mobile phone, Apple's iPhone, can be used out-of-the-box by people who are blind or visually impaired. The availability of this single choice is restricted to only one network. Otherwise, the options of accessible mobile devices are severely limited for consumers with vision loss. Blind and visually

impaired Americans are forced to choose among a few mobile devices with access to only a few functions, or compelled to buy special software that costs at least two to five times more than the mobile device itself. For example, Mobile Speak (software that provides speech output for cell phone menus, text messages and web sites) costs \$295. Oratio (the software application that currently provides access to one Blackberry device) costs \$449.

Rather than building in access features from the start, mobile phone manufacturers generally rely on third-party expensive specialty software that customers with vision loss must buy on their own on top of the purchase of the mobile device itself. (To their credit, both AT&T and Verizon partially subsidize the cost of such software for some of the phones they provide.)

The following comments are organized in a manner that reflects key areas of concern regarding accessibility of mobile technology.

Limitations of Third Party Accessibility

In order to obtain accessibility on a mobile phone, many blind and visually impaired individuals are compelled to purchase their own third party screen reading and magnification applications. For these individuals the path from making the decision to use this strategy to placing the first call can be long, difficult, and expensive.

The first obstacle which must be surmounted when using third party accessibility applications is cost. The \$299USD to \$449USD price for these applications places them beyond the reach of many blind and visually impaired individuals who, as a group, experience staggeringly high rates of unemployment. Even with carrier supported pricing \$89USD or \$99USD still represents a price which can easily double the total hardware startup price tag for consumers with vision loss when compared to their sighted peers.

Even when the customer has the means to purchase a third party accessibility solution obtaining timely and accurate information from carriers and manufacturers is difficult or impossible. Because the number of phones which can be made accessible by these applications is only a small subset of all available models, and because the knowledge of sales staff in retail locations is limited, it is very often the case that suitable phones are overlooked and inappropriate phones are incorrectly identified as supporting third party software.

Among the collection of phones that support third party accessibility, important differences create additional access barriers. For example some models of Nokia phones support only one of the two dominant screen access packages, and vice versa. Since the software is purchased independently from the phone a series of Hobson's choices arise when either the software changes or it is time to upgrade to a new phone.

AFB has identified the inaccessibility of installation as a significant and persistent barrier for third party phone access software. Because an intermediate program needs to be

installed on a personal computer, in order to manage the installation of the accessibility package, that intermediate program must also be accessible. Often, if not always, these PC applications are far from being accessible, or require extraordinarily detailed knowledge of PC screen access technology to manage. The alternative is to download and install the accessibility software directly on the phone. Since the phone is inaccessible, this alternative simply isn't available.

Defining Accessibility

Important characteristics of mobile phone accessibility have been identified through the development and maturation of third party strategies. In at least one instance, Apple's VoiceOver, for the iPhone, these same levels of accessibility have been successfully provided by a manufacturer. In short, in order to say that a phone, or advanced wireless device is accessible all elements of the operating system, which are available to the user visually must also be presented nonvisually, or with enhanced visual access for consumers with low vision. This includes functions associated with voice calling as well as network based features such as messaging, e-mail and web-based features and services. Beyond the features and functionality provided by the manufacturer and carrier, support for third party applications must be provided (of particular importance for the installation and use of screen access software). Again Apple has successfully demonstrated the practicality and effectiveness of this expectation. To a lesser, but still important level the Android operating system has proven at least manageable in terms of accessibility.

Lack of Accessibility Information

AFB has observed an industry-wide pattern of inconsistency and scarcity of accurate and readily available information specifically addressing mobile device accessibility. The web sites of the major carriers, prepay providers and device manufacturers typically contain little if any obvious information on the home page. Verizon is an exception to this rule and provides a good example of well constructed and accurate accessibility information.

More typical is the T-Mobile website, which appears to have no accessibility information. AFB reviewed www.tmobile.com recently and was surprised that even a key word search was unable to reveal appropriate information of use to blind and visually impaired customers or potential customers with respect to the accessibility of the companies' products.

Manufactures distribute electronic manuals for both inaccessible and accessible phones in the PDF format. This format is prone to inaccessibility by a number of characteristics including the use of graphic images rather than plain text words such as "Keypad," "Send Button", "Enter Key" and so forth. Some carriers and manufactures produce manuals for select phone models in alternative formats such as Braille and Microsoft Word format. This useful service is severely limited to only a handful of phones and is not always mentioned to customers.

The overwhelming experience of the many blind and visually impaired individuals with whom AFB communicates indicates that the in store experience further exasperates the problem of lack of information. All too often well meaning sales and technical staff are unable to provide any meaningful information, or worse provide inaccurate information with respect to the accessibility of the company's products and services. This problem is particularly pernicious when Android phones are being considered. The confusing variety of devices and features requires very detailed understanding that only a very few Android devices can accommodate the limited levels of accessibility to the operating system and its applications. This level of understanding simply is not present among rank and file sales associates in phone stores, and as mentioned above, the web sites which should provide the necessary technical detail simply do not.

Little Accessibility in Basic Phones

For many individuals experiencing vision loss, the specter of mastering the complex interface of a smart phone with a screen access program or using Apple's VoiceOver utility is simply overwhelming, making a basic phone the only practical choice.

To date, we are aware of only one device in this class of phones that is fully accessible. Verizon has recently introduced the Haven, which, we understand, provides comprehensive access to all menu items and announces navigation and text messaging activities. Beyond this single example available on only one carrier, AFB is not aware of any fully accessible basic phone available from any other carrier.

A smattering of phones provide some limited voice announcements of a limited number of features. LG includes voice output on a few of its phones, but important information from the directory of stored contacts can't be accessed. In addition, we are not aware of other phones in this category that allows full access to compose, edit and review text messages.

The practical, real world result is that if you are blind or visually impaired, and you want a fully accessible basic phone there is only one phone for you, and there is only one place to get it.

Little Accessibility in Feature Phones

Between the basic phone and complex devices such as the iPhone, which can support third party screen access software is an important and almost completely inaccessible class of mobile device. The "feature phone" provides network-based functions in addition to voice calling capacity. Text-based messaging and internet browsing are the most significant of these additional "features."

To date only a few devices which provide accessible "feature phone" functionality have been available. Of this small group of products, several have been discontinued. Of the

remaining examples, no device is fully accessible to a consumer who is blind or visually impaired.

Carrier Performance

Prepay only carriers including TracFone, Virgin Mobile, Straight Talk Wireless, Boost Mobile, and T-Mobile Prepay comprise an entire segment of the cellular market which provides no observable or measurable accessibility to blind or visually impaired customers. This complete absence of any meaningful accessibility to prepay services, obtained through this category of carriers precludes blind and visually impaired citizens from purchasing some of the most economical phone and data plans available. AFB views this unacceptable situation as a particularly bitter irony since the Federally supported safelink.com, a program to provide phones to individuals with low income appears to use TracFone, which can not provide an accessible phone.

Focusing on the contract carriers we can observe few if any meaningful indicators of accessible mobile devices in at least two, T-Mobile and Sprint. With these providers some limited devices and activity to support customers is observed, from time to time. This is not the same as a consistent and meaningful set of outcomes which demonstrate the on-going availability of accessible devices and information.

Verizon Wireless and AT&T have made meaningful progress in fulfilling the promise of accessible mobile communication for individuals with vision los. In both instances consistent efforts have produced successful outcomes. Verizon and AT&T both subsidize the purchase of third party software enabling individuals to use the most advanced technology. Verizon has advanced the level of accessibility of basic phones with the introduction of the Haven and provides a well constructed and meaningful web site to inform customers and others about its products and services.

AT&T provides the iPhone, the most accessible mobile device available. The \$99 price of the iPhone 3GS makes the technology more affordable than ever.

Summary

After nearly 15 years operating under current law, AFB is forced to report that very little meaningful accessibility has been achieved in mobile technology. Despite the availability of a wide range of mobile devices, available from a variety of carriers, only Verizon and AT&T have taken significant steps to provide meaningful accessibility to their customers with vision los.

The complete absence of accessible prepay options is a particularly disturbing and unacceptable development.

AFB encourages the Commission to remedy this seemingly intractable problem by vigorously enforcing the existing regulatory requirements for both carriers and manufacturers. Only through aggressive action on the part of the Commission will

meaningful accessibility become the norm, rather than the exception. In essence, people with vision loss are simply looking to have access to equipment and services for which they are currently paying full fare but which they largely cannot use. Thank you for your leadership to change this unacceptable status quo.