

SUNspot – Adults with Disabilities and Sources of Wireless Accessibility Information

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We created “SUNspot” to share some of the latest findings from ongoing data collection for our Survey of User Needs (SUN), our cornerstone survey on use and usability of wireless technology by people with disabilities. We launched the first version of the SUN in 2001. The current version (Version 4) was launched in September 2012. The data reported here are preliminary results. Data collection is ongoing. Almost 1300 people have completed the SUN questionnaire to date, over 1000 of whom reported having one of the following difficulties:

- *Difficulty concentrating, remembering or making decisions*
 - *Frequent worry, nervousness, or anxiety*
 - *Difficulty seeing*
 - *Difficulty hearing*
 - *Difficulty speaking so people can understand you*
 - *Difficulty using your arms*
 - *Difficulty using your hands and fingers*
 - *Difficulty walking or climbing stairs*
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This SUNspot addresses the question of which sources of information people with disabilities consult when choosing their wireless device. Responses to this question are analyzed for:

1. All respondents with a disability
2. All respondents with a disability by disability type
3. All respondents with a disability by age

The question of which sources of information people with disabilities use when choosing a wireless device is one that has garnered considerable attention from the wireless industry, government regulators and others involved in promoting the accessibility of wireless technology by people of all abilities. Mobile devices have become ever more flexible and

capable, while the number of models has become considerable. In response, the wireless industry and government regulators have sought to develop new tools for helping consumers sort through the numerous choices.

In 2009, the CTIA-The Wireless Association, the international organization for the wireless telecommunications industry, launched an updated version of AccessWireless.org, a dedicated website for accessibility information targeted at consumers with disabilities. In April 2011, the CTIA incorporated into AccessWireless.org the search tool developed by the Mobile Manufacturers Forum (MMF) for identifying mobile devices with specific accessibility features. This tool is based on the Global Accessibility Reporting Initiative (GARI) template, which was originally developed as a common accessibility reporting form which device manufacturers hoped to use internationally, thereby standardizing the reporting task.

Updating AccessWireless.org was inspired in part by new rules being implemented in the United States under the 21st Century Communications and Video Accessibility Act (CVAA). The CVAA requires wireless companies to undertake – and document – their efforts to communicate accessibility information to consumers. Also, in 2011 the Federal Communications Commission launched its Accessibility Clearinghouse (<http://apps.fcc.gov/accessibilityclearinghouse>). Mandated by the CVAA, the Accessibility Clearinghouse is an online “information hub about phones and innovative ways to communicate, especially for people who may have a disability”, according to the website.

In the second half of 2011, the MMF undertook a thorough review and update to the GARI reporting tool to make it more effective as a tool for consumers to find the device with the accessibility features they need. In 2013, the GARI reporting template has undergone another review and update to keep up with rapidly evolving wireless technology and to make it more useful to people seeking accessible wireless devices. With this updated version (www.gari.info) users can search for devices that run their favorite accessibility apps, as well as more than 110 other features in the GARI related to access for people with mobility, vision, hearing, speech or cognitive impairments.

The success of these and other efforts to communicate accessibility information (including advertizing, sales training, etc.) will depend on whether they communicate through the channels of information that consumers already use. If not, additional effort will be needed to help consumers gain awareness of and use new information sources. Data gathered by the Wireless RERC through focus groups composed of people with vision, hearing and dexterity loss suggest that people with disabilities are most likely to consult other people they know, especially others with disabilities.

This SUNspot explores whether these findings are reflected in survey data. If so, what is the probable reach of online consumer sources of wireless accessibility information like AccessWireless.org and the FCC's Accessibility Clearinghouse? What is the probably reach of other sources such as retail salespersons, websites of wireless companies and advertizing?

Sources of information for choosing a wireless device

Table 1 shows the responses of all SUN respondents who reported having one or more of the disabilities listed above. These respondents noted the sources of information they used to select their primary wireless device. As expected, the most common response (46%) was a recommendation from a friend, family member or healthcare professional. Online consumer resources (which could include blogs, podcasts, listservs, news sources, and others) was the second most common information source, identified by only 23% of respondents, half as many as those who based their decision on recommendations of friends, family members, or healthcare professionals. Respondents consulted service provider websites and salespeople at somewhat lower rates (20% and 18%, respectively).

Table 1 – What sources of information did you consult when selecting your wireless device?*

Source of information	All respondents with a disability
Recommendation (from friend, family, healthcare professional, etc.)	46%
Online consumer sources (blogs, podcasts, listservs, news sources, etc.)	23%
Service provider websites	20%
Sales person	18%
Device maker website	12%
Package label	11%
Advertisement	10%
Other	17%

*Percentages add to more than 100%, as many participants consulted more than one source of information.

Disability type and information sources consulted

The data in Table 2 shed light on whether the type of disability influences use of various sources of wireless accessibility information. First, these data show minimal variability in the percentages of each disability that consult online consumer sources and package labels.

Second, the seven disability types form two distinct groups in regard to the use of recommendations and advertisements as information sources. The first of these groups, composed of respondents with cognitive, sensory (seeing and hearing), and speech limitations, relies on recommendations much more than the second group composed of the three physical disabilities (using arms, hands, and fingers, and walking and climbing stairs). Conversely, the first group relies on advertising as a source of information substantially less than the second group.

These results probably reflect differences in the accessibility needs of people with cognitive, sensory or speech limitations compared with people with physical limitations. Focus group research conducted by the Wireless RERC with people with upper extremity and manual limitations (not including those with high level spinal cord injuries resulting in no movement in the arms or shoulders) indicates high levels of adaptability to the design of their mobile devices. That is, their needs are less acute, and are also highly variable across individuals. On the other hand, consumers with cognitive, vision, hearing and speech limitations have very specific and acute accessibility and assistive technology needs. These consumers are more likely to consult trusted sources in their personal networks, and less likely to rely in advertising.

Table 2 – What sources of information did you consult when selecting your wireless device?
(by disability)

Source of information	Cognitive difficulty	Seeing	Hearing	Speaking	Using arms	Using hands, fingers	Walking, climbing stairs
Recommendation (from friend, family, healthcare professional)	45%	50%	47%	47%	30%	34%	38%
Online consumer sources	23%	32%	22%	22%	19%	22%	19%
Service provider websites	15%	19%	23%	22%	23%	24%	20%
Sales person	21%	15%	17%	18%	22%	21%	22%
Device maker website	10%	14%	12%	16%	19%	16%	15%
Package label	12%	11%	12%	13%	12%	11%	12%
Advertisement	9%	11%	8%	9%	18%	15%	14%
Other	21%	21%	20%	16%	18%	18%	17%

*Percentages add to more than 100%, as many participants consulted more than one source of information.

Respondent age and information sources consulted

The data were also analyzed by age (Table 3). One might expect that younger respondents would be more likely to use online sources, whether consumer-oriented sources or the websites of service providers and handset manufacturers. Older respondents might be more likely to consult the recommendations of friends, family and healthcare providers.

The clearest patterns in the data in Table 3 pertain to two of the information sources listed: recommendations and advertisements. Respondents under 45 are substantially more likely than older respondents to have consulted these sources. Additionally, the data suggest that respondents 55 years or older are more likely to consult a salesperson than younger respondents.

Table 3 – What sources of information did you consult when selecting your wireless device? (by age)

Source of information	18-34	35-44	45-54	55-64	65 and older
Recommendation (from friend, family, healthcare professional)	55%	50%	43%	43%	38%
Online consumer sources	23%	28%	24%	23%	20%
Service provider websites	20%	22%	23%	21%	18%
Sales person	15%	15%	17%	23%	19%
Device maker website	11%	15%	15%	12%	13%
Package label	12%	13%	11%	11%	7%
Advertisement	12%	12%	8%	8%	9%
Other	12%	16%	20%	19%	22%

*Percentages add to more than 100%, as respondents were asked to select all that apply.

Conclusion

These results confirm focus group and anecdotal data collected by the Wireless RERC, indicating that the most commonly used source of information that people with disabilities use to choose a wireless device is their personal network of friends, family and healthcare professionals. Other sources – including online consumer sources, carrier and manufacturer websites, and salespeople – are also used by substantial, if smaller, percentages of people across all disability types and ages.

These results indicate that communicating wireless accessibility information requires multiple channels. They also indicate the need to reach not just end users with disabilities, but also others in their personal networks.

Data source: Survey of User Needs (SUN), Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC). We share survey data with manufacturers and carriers, as well as with policymakers, for the purpose of improving usability of wireless technology. SUN data are regularly used in guiding industry and government initiatives. We invite the public to take the Survey of User Needs and share how wireless technology affects daily life, and how it could be improved. The survey is available on paper, by phone (404-367-1348), or online at: https://www.surveymonkey.com/s/SUN_2012-2013.

The data presented here are based on a non-random sample. The survey is promoted as broadly as possible through convenience sampling techniques, with special effort toward reaching under-represented groups.

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