

## **SUNspot – Wireless Device Operating Systems of People with Disabilities**

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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 latest version (Version 5) was conducted in the second half of 2015 and first half of 2016.*

### **Introduction**

This SUNspot addresses the following question related to wireless devices ownership by adults with disabilities:

- Do people with disabilities have a preference for smart devices (smartphones and tablets) running a particular operating system (iOS, Android, etc.)?

The answer to this question can shed light on whether one operating system – and the vendors who build devices for that operating system – is found to be more accessible and useable by people with disabilities.

### **Background to the SUN**

Originally launched in 2002 and now in its 5th version, the SUN has been updated over the years to keep current with the rapid pace of technological change. This unique, nationwide survey on wireless technology use by people across disabilities has come to be an important reference for the wireless industry, government regulators, people with disabilities, disability advocates, and other researchers. Over 7,500 people with all types of disabilities have completed at least one of the previous versions of the SUN since 2002. Sample size for SUN 5 is 1,168. Participants were recruited using convenience sampling via email, the web, personal outreach, telephone, and in-person interviews. The mean age of all respondents who reported a disability was 59.29 years and 52.23 for the 2012-2013 and 2015-2016 surveys, respectively. Whites accounted for 81 percent and 84 percent of the earlier and later samples, respectively. Females represented 58% of respondents in both surveys. Regarding income, 61 and 56 percent of the earlier and later samples reported annual household income below \$50,000.

Of over 1150 SUN respondents, 970 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

### Operating systems of wireless devices of people with disabilities

Tables 1 and 2 show the distribution of operating systems on the smartphones and tablets (respectively) reported by SUN respondents with disabilities.

**Table 1 – Operating systems of smartphones owned by SUN respondents with disabilities**

<b>If you own or use a SMARTPHONE, what kind of you have? (Operating System)*</b>	<b>SUN** (n=646)</b>
Apple iOS smartphone (Examples: Apple iPhone)	56%
Android powered smartphone (Examples: Motorola Droid, Samsung Galaxy S)	43%
Windows powered smartphone (Examples: Nokia Lumia, HTC Tilt, Samsung Focus)	3%
BlackBerry smartphone (Example: BlackBerry Bold 9700)	1%
Other	1%
Don't know	1%

\* Percentages sum to more than 100% because some respondents have more than one device, using different operating systems.

\*\* SUN results weighted by income based on ACS

**Table 2 – Operating systems of tablets owned by SUN respondents with disabilities**

<b>If you own or use a TABLET, what kind of you have? (Operating System)* (n=456)</b>	<b>SUN**</b>
Apple iOS tablet (Examples: Apple iPad)	65%
Android powered tablet (Examples: Samsung Galaxy Tab, Amazon Kindle Fire)	35%
Apple iOS tablet (Examples: Apple iPad)	65%
BlackBerry tablet (Example: BlackBerry Playbook)	<1%
Windows powered tablet (Examples: Microsoft Surface)	7%
Other	3%
Don't know	1%

\* Percentages sum to greater than 100% because some respondents have more than one device, using different operating systems.

\*\* SUN results weighted by income based on ACS

Apple's iOS operating system holds a substantial lead in among smartphones owned by SUN respondents with disabilities, and an even more substantial lead for tablets. The iOS operating market share for smartphones among people with disabilities is substantially larger than its market share among the general population in the United States, which stood at 44% (versus Android's 53%) in January 2016. Apple's iOS market share for tablets among SUN respondents with disabilities (65%) far outperforms its market share for the general population in the United States (26%).

**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. 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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