



# Screen Reader User Survey #9 Results

## Introduction

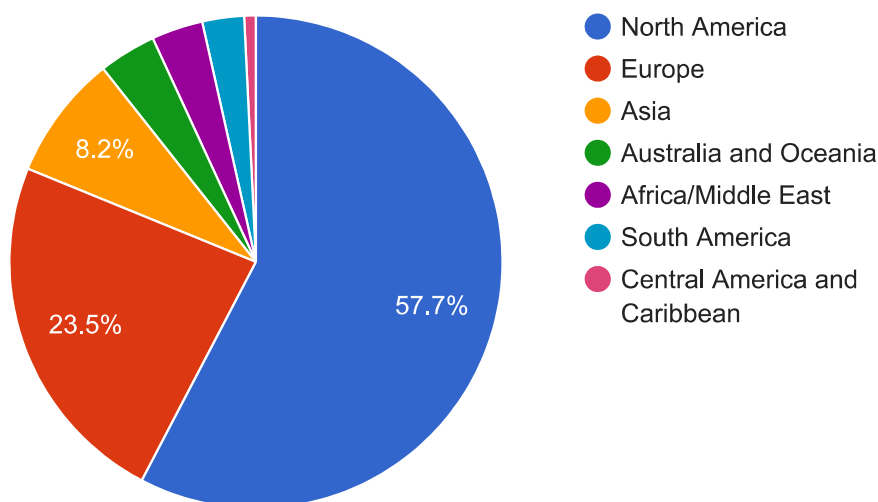
In May - June 2021, WebAIM surveyed preferences of screen reader users. We received 1568 valid responses. This was a follow-up to [8 previous surveys](#) that were conducted between January 2009 and September 2019.

A few disclaimers and notices:

- Totals may not equal 100% due to rounding.
- Total responses (n) for each question may not equal 1568 due to respondents not answering a particular question.
- The sample was not controlled and may not represent all screen reader users.
- We hope to conduct additional surveys of this nature again in the future. If you have recommendations or questions that you would like us to ask, please [contact us](#).

## Demographics

### Region



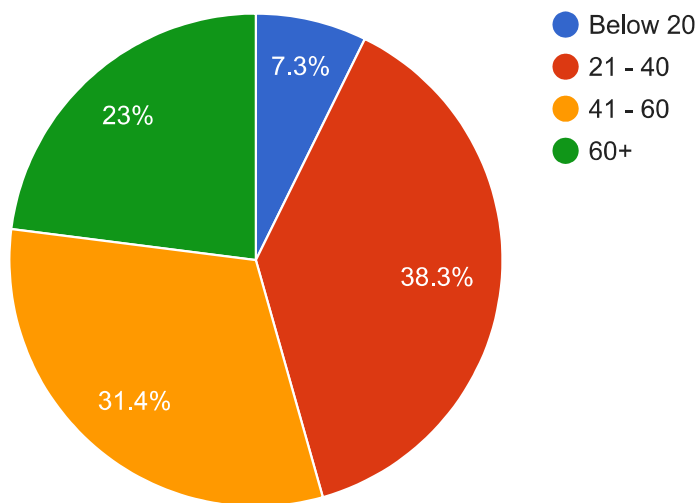
Respondent Region

Region	# of respondents	% of respondents
North America	888	57.7%
Europe	362	23.5%
Asia	126	8.2%

Australia and Oceania	58	3.8%
Africa/Middle East	52	3.4%
South America	42	2.7%
Central America and Caribbean	12	0.8%

This survey had more respondents outside North America and Europe than previous surveys, thus providing better representation of the global screen reader user audience.

## Age

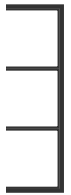
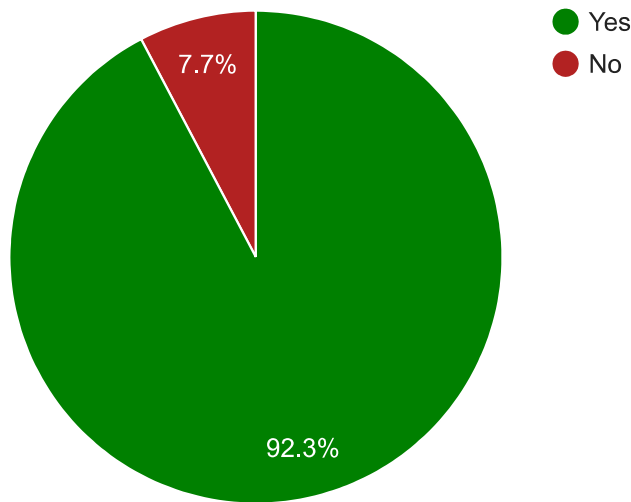


Please indicate your age.

Age	# of respondents	% of respondents
Below 20	114	7.3%
21 - 40	600	38.3%
41 - 60	491	31.4%
60+	360	23.0%

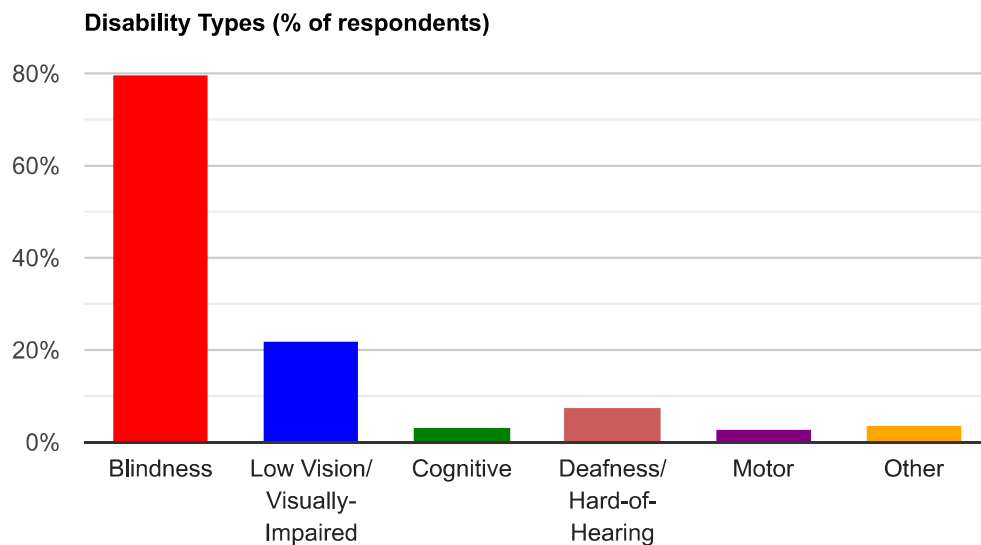
This survey had a much higher number of respondents aged 60 or older than any other previous survey.

## Disability



... notable differences are detailed below to highlight differences in practices or perceptions between disabled and non-disabled respondents.

## Disability Types

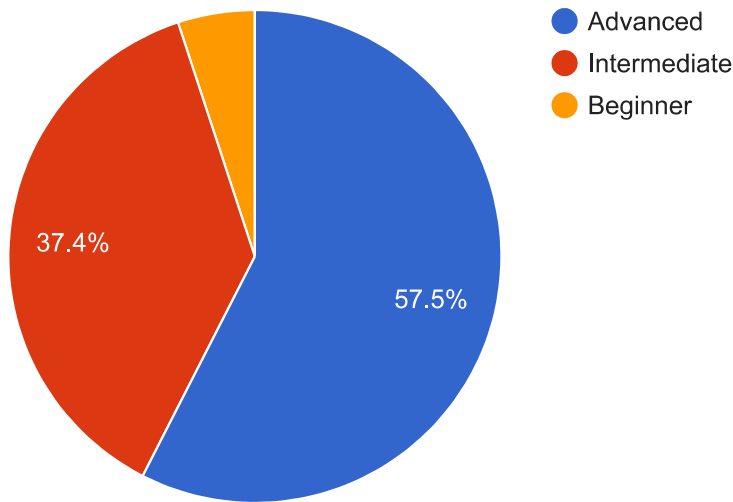


Which of the following disabilities do you have?

Response	# of respondents	% of respondents
Blindness	1246	79.5%
Low Vision/Visually-Impaired	344	21.9%
Cognitive or Learning	50	3.2%
Deafness/Hard-of-Hearing	114	7.3%
Motor	37	2.4%
Other	57	3.6%

295 respondents (18.8%) reported multiple disabilities. 101 respondents (6.4%) reported being both deaf and blind.

Screen Reader Proficiency

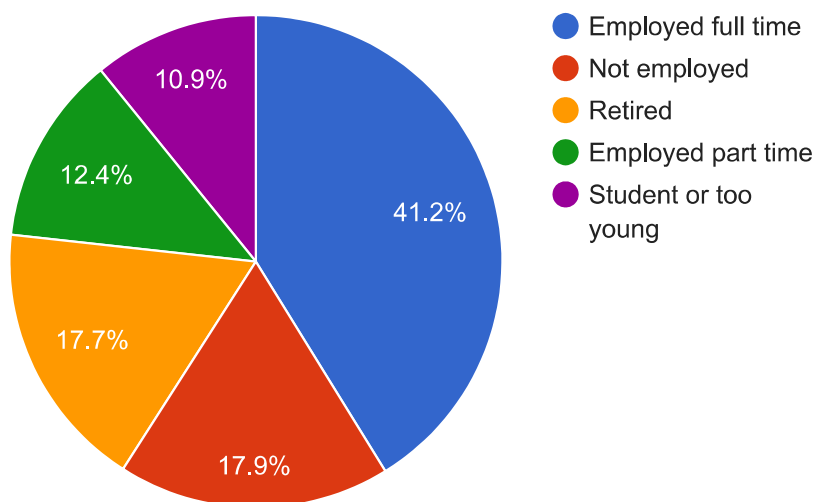
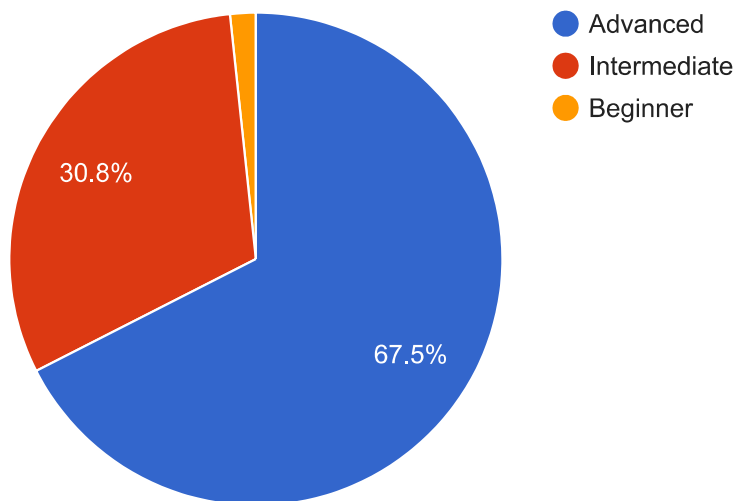


Please rate your screen reader proficiency.

Response	# of respondents	% of respondents
Advanced	887	57.5%
Intermediate	577	37.4%
Beginner	78	5.1%

Those who use screen readers due to a disability reported themselves as more proficient with screen readers—60.5% of those with disabilities considered their proficiency to be "Advanced" compared to only 21.2% of those without disabilities.

Internet Proficiency



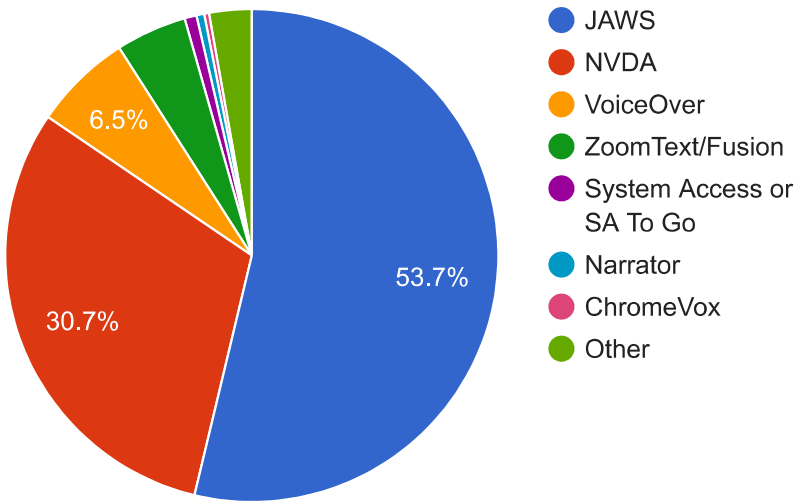
Please indicate your current level of employment.

Response	# of respondents	% of respondents
Employed full time	634	41.2%
Not employed	275	17.9%
Retired	272	17.7%
Employed part time	191	12.4%
Student or too young	167	10.9%

83.2% of survey respondents who do not have a disability are employed full time, compared to 37.6% of respondents who do have a disability. The reported employment rate is significantly higher than the 29.5% for

individuals with significant vision loss [reported by the NFB in 2016](#). This survey had a much higher number of retired respondents than previous surveys.

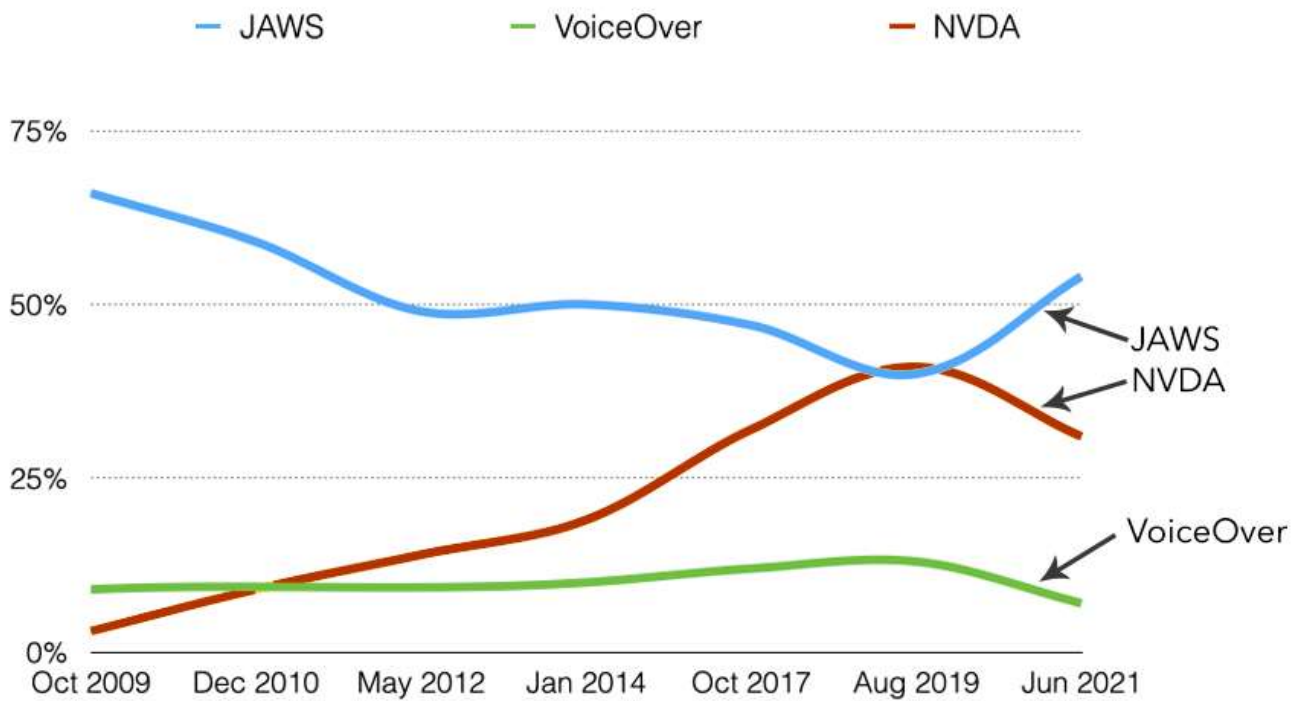
## Primary Screen Reader



Which of the following is your primary desktop/laptop screen reader?

Response	# of respondents	% of respondents
JAWS	832	53.7%
NVDA	476	30.7%
VoiceOver	100	6.5%
ZoomText/Fusion	72	4.7%
System Access or System Access to Go	12	0.8%
Narrator	8	0.5%
ChromeVox	5	0.3%
Other	43	2.8%

The following chart shows historical trends for primary screen reader usage.

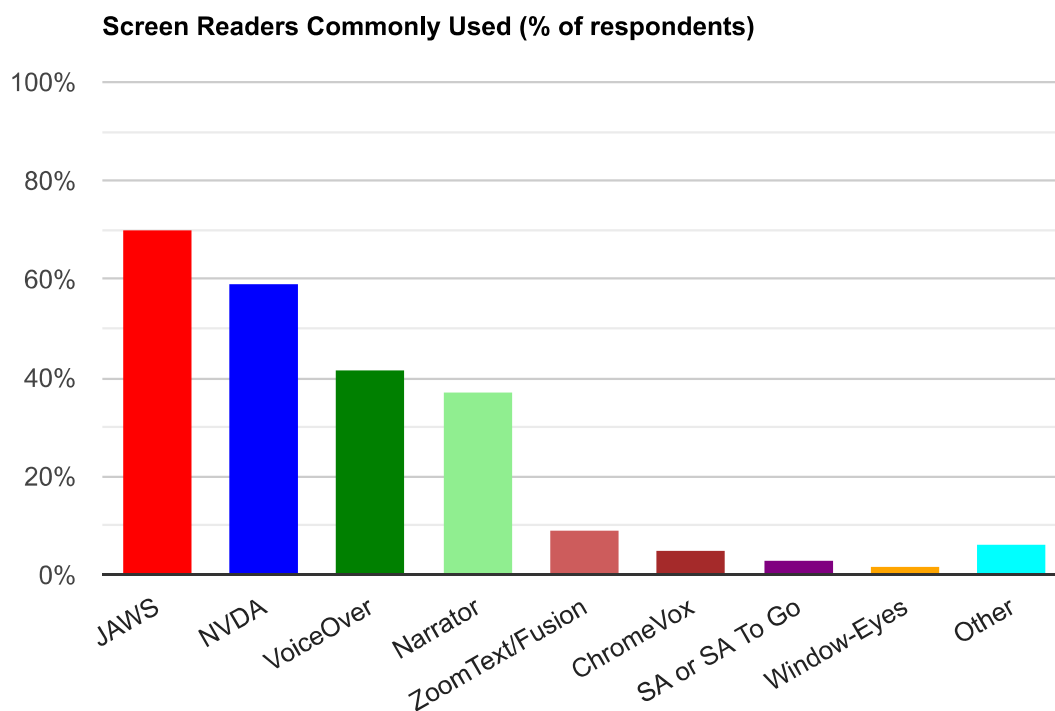


After a decade of declines, JAWS is once again reported as the most common primary screen reader, with NVDA and VoiceOver both showing notable decreases in primary usage over the last two years.

Respondents with disabilities are more likely to use JAWS and NVDA and less likely to use VoiceOver as their primary screen reader than respondents without disabilities. 5.5% of respondents with disabilities primarily use VoiceOver, compared to 18.5% of respondents without disabilities.

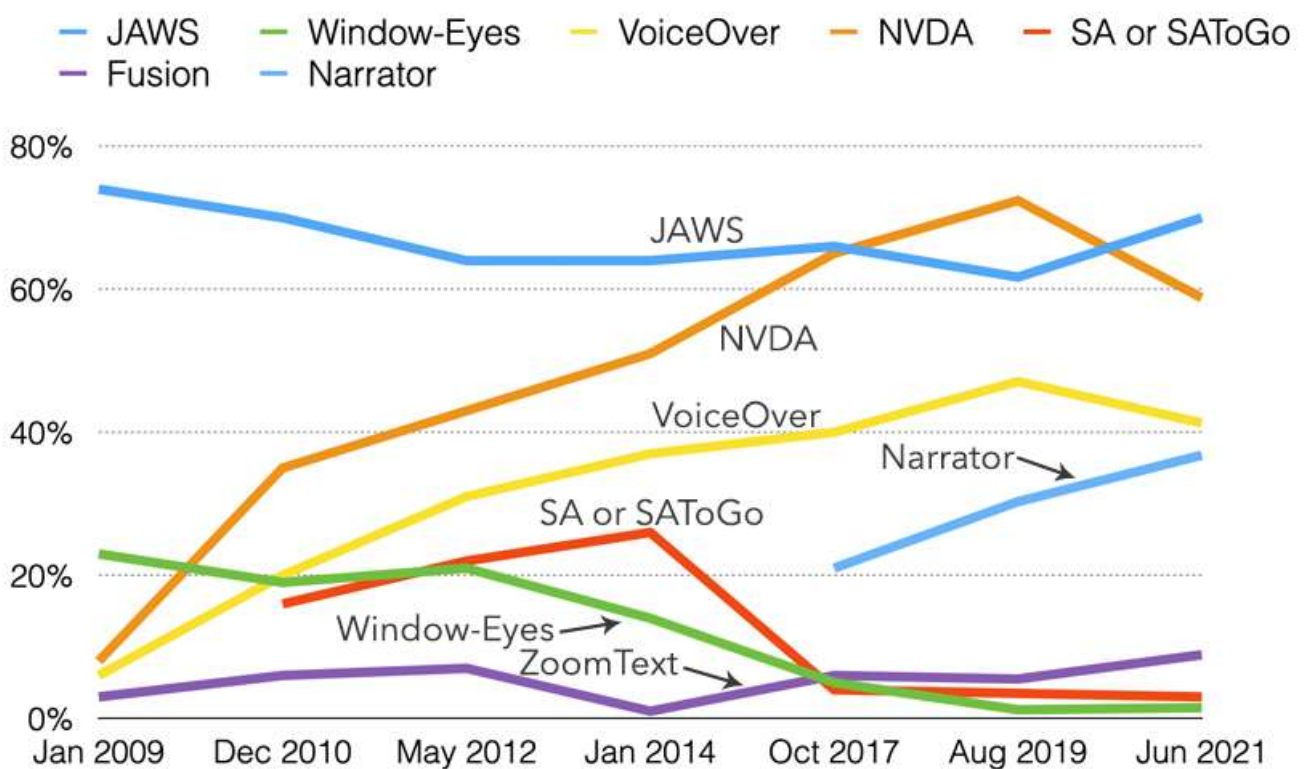
Primary usage varied greatly by region. JAWS usage was much higher than NVDA in Australia (71.4% vs. 21.4%) and North America (63.1% vs. 19.4%), though JAWS usage was lower than NVDA in Europe (40.2% vs. 41.6%), Africa/Middle East (38.5% vs. 61.5%), and Asia (31.5% vs. 39.7%).

## Screen Readers Commonly Used



Which of the following desktop/laptop screen readers do you commonly use?

Response	# of respondents	% of respondents
JAWS	1097	70.0%
NVDA	922	58.8%
VoiceOver	648	41.3%
Narrator	577	36.8%
ZoomText	140	8.9%
ChromeVox	73	4.7%
System Access or System Access to Go	47	3.0%
Window-Eyes	24	1.5%
Other	99	6.3%

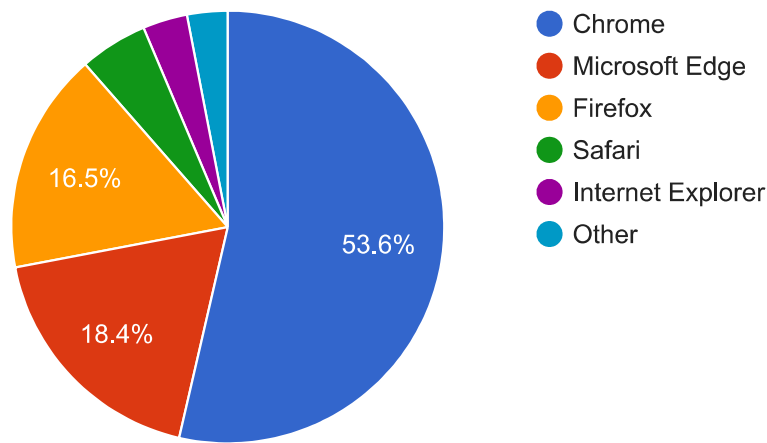


Usage of JAWS and Narrator increased notably over the last two years, with NVDA and VoiceOver usage decreasing. Narrator—freely available in Windows for several years—is the primary screen reader of only .5% of respondents, but commonly used by 41.3% of respondents (up from 21.4% in 2017 and 30.3% in 2019).

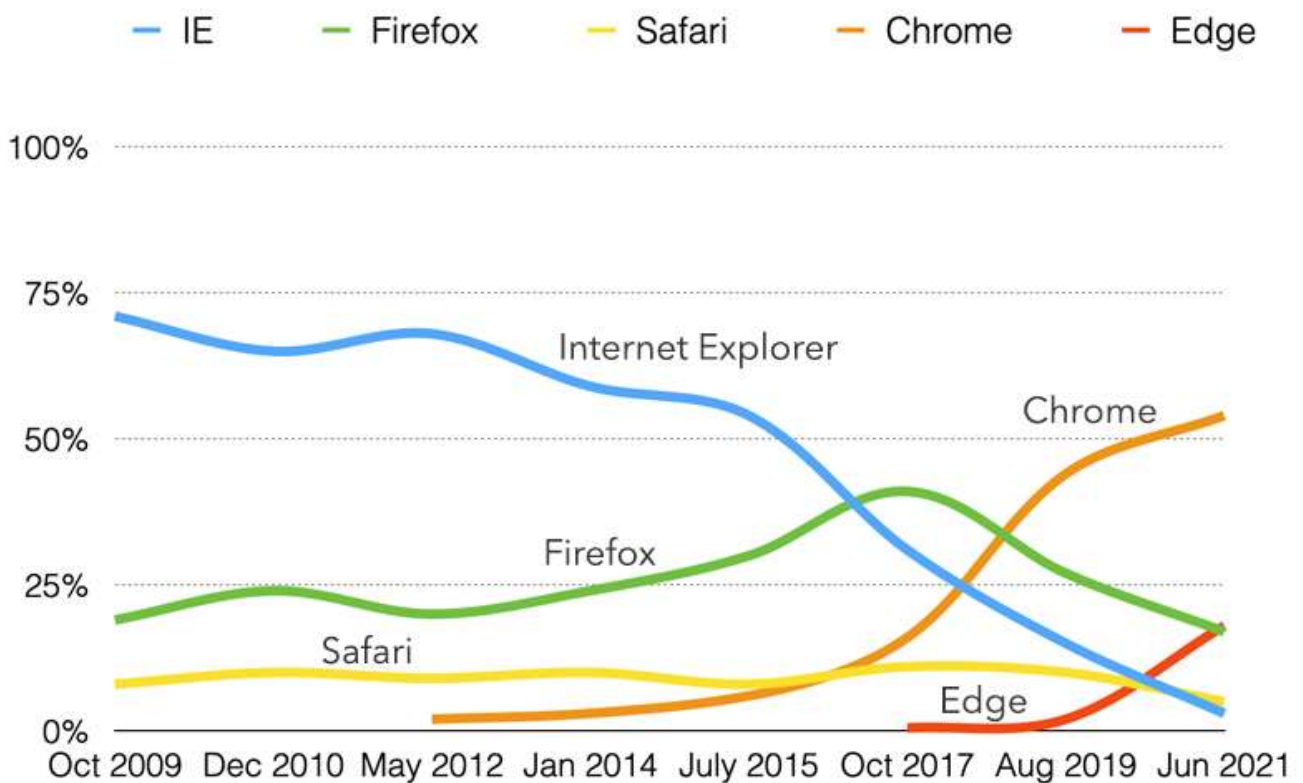
71.3% of respondents use more than one desktop/laptop screen reader. This was up from 53% in July 2015 and 68% in 2017. 39% use three or more, and 15.9% use four or more different screen readers. VoiceOver users most commonly use additional screen readers, which is notable since the other screen readers run almost exclusively on Windows.

## Browsers





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Microsoft Edge	286	18.4%	
Firefox	257	16.5%	
Safari	79	5.1%	
Internet Explorer	52	3.3%	
Other	47	3.0%	



Chrome usage among respondents continues to increase with it being used as a primary browser more than all other browsers combined. Microsoft Edge usage also increased notably over the last two years—it is now the 2nd most used primary browser. Internet Explorer usage continued to decline to only 3.3% of respondents.

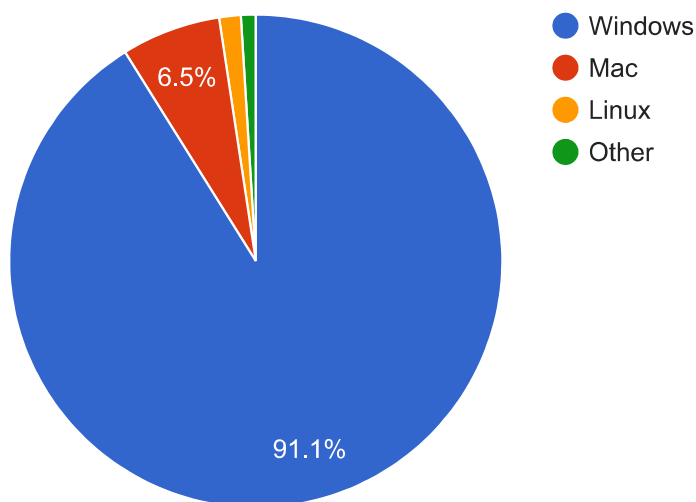
## Screen Reader / Browser Combinations

## Most common screen reader and browser combinations

Screen Reader & Browser	# of Respondents	% of Respondents
JAWS with Chrome	500	32.5%
NVDA with Chrome	246	16.0%
JAWS with Edge	194	12.6%
NVDA with Firefox	149	9.7%
JAWS with Firefox	74	4.8%
VoiceOver with Safari	72	4.7%
NVDA with Edge	55	3.6%
ZoomText/Fusion with Chrome	33	2.1%
JAWS with Internet Explorer	30	1.9%
VoiceOver with Chrome	24	1.6%
ZoomText/Fusion with Edge	18	1.2%
Other combinations	144	9.4%

There are **many** combinations of browsers and screen readers in use, with JAWS with Chrome by far the most common.

## Operating System



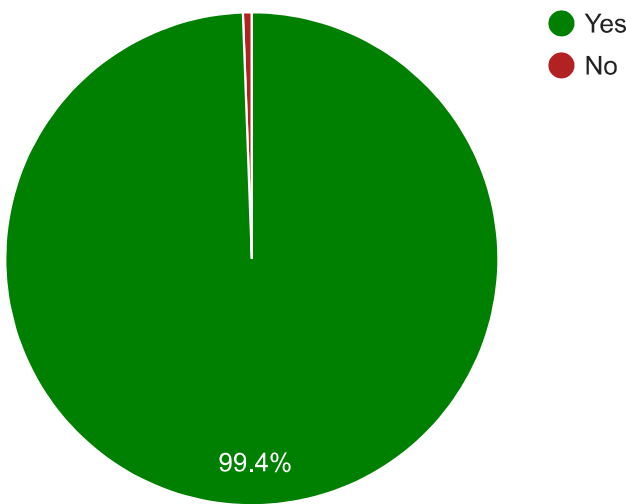
What operating system are you on when using your primary desktop/laptop screen reader?

Response	# of respondents	% of respondents
Windows	1412	91.1%
Mac	101	6.5%

Linux	22	1.4%
Other	15	1.0%

Respondents without disabilities were almost 4 times more likely to use Mac OS than respondents with disabilities.

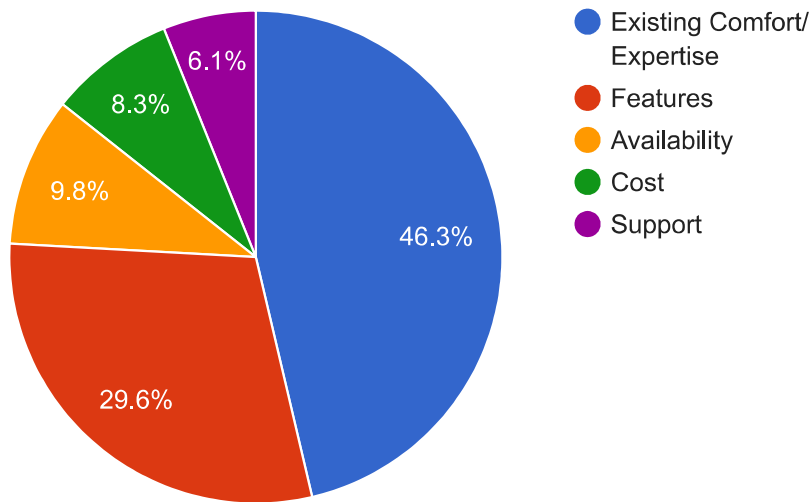
## JavaScript



JavaScript Enabled	
Response	% of Respondents
Yes	99.4%
No	.6%

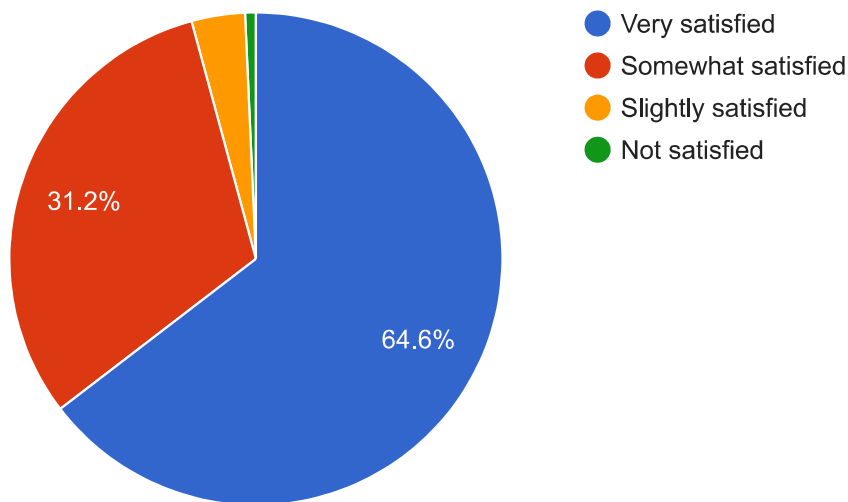
JavaScript support was detected with the survey form submission. Nearly all respondents had JavaScript enabled.

## Reason for Use



Support and Expertise are increasingly important, whereas availability and cost are less important. This may at least partially explain the increase in usage of JAWS compared to the past.

## Screen Reader Satisfaction



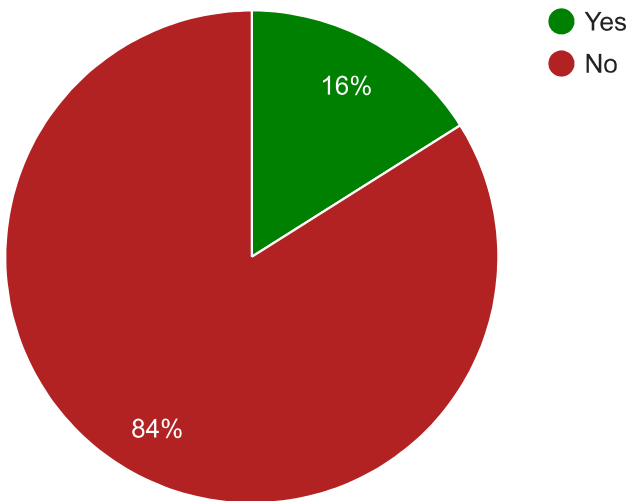
How satisfied are you with your primary screen reader?

Response	# of respondents	% of respondents
Very satisfied	998	64.6%
Somewhat satisfied	482	31.2%
Slightly satisfied	54	3.5%
Not satisfied	11	0.7%

Respondents indicating that they are very or somewhat satisfied by their primary screen reader:

- NVDA - 97.3%
- JAWS - 95.3%
- VoiceOver - 93.7%
- ZoomText/Fusion - 91.5%
- Narrator - 87.5%

## Home vs. Work



Do you use a different screen reader at work or school than at home?

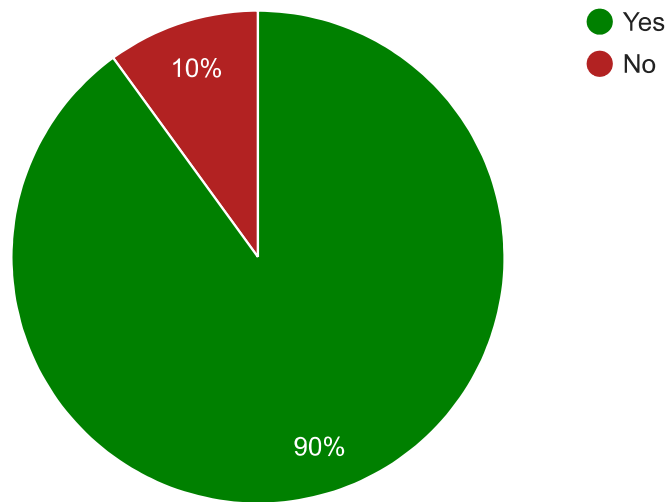
Response	# of respondents	% of respondents
Yes	232	16.0%
No	1215	84.0%

24.7% of respondents to [this same question in 2015](#) reported using a different screen reader at work/school vs. home, compared to only 16% in 2021.

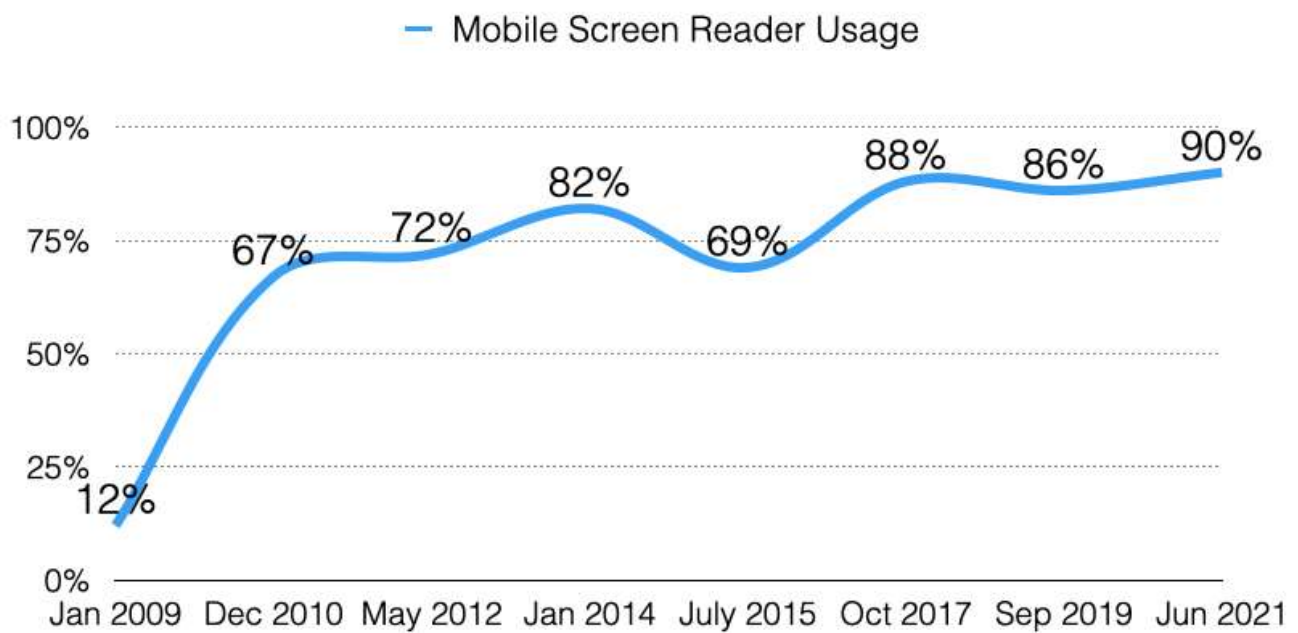
36% of VoiceOver users reported using a different screen reader at work/school vs. home, compared to 25% for Narrator, 17% for NVDA, and 13% for JAWS.

## Mobile Screen Readers

### Mobile Usage

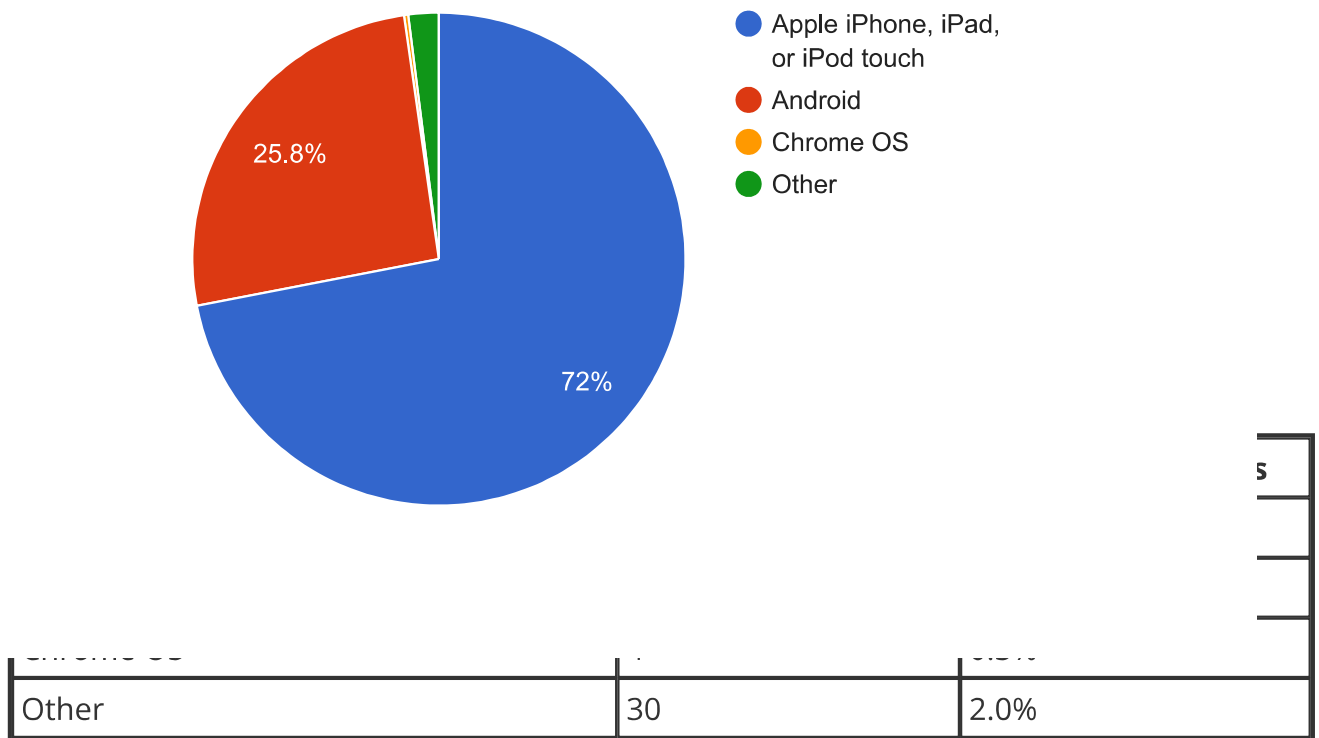


90% of respondents report using a screen reader on a mobile device. This number has increased over the last 12 years. Respondents with disabilities (91.6%) are more likely to use a mobile screen reader than respondents without disabilities (71.4%).

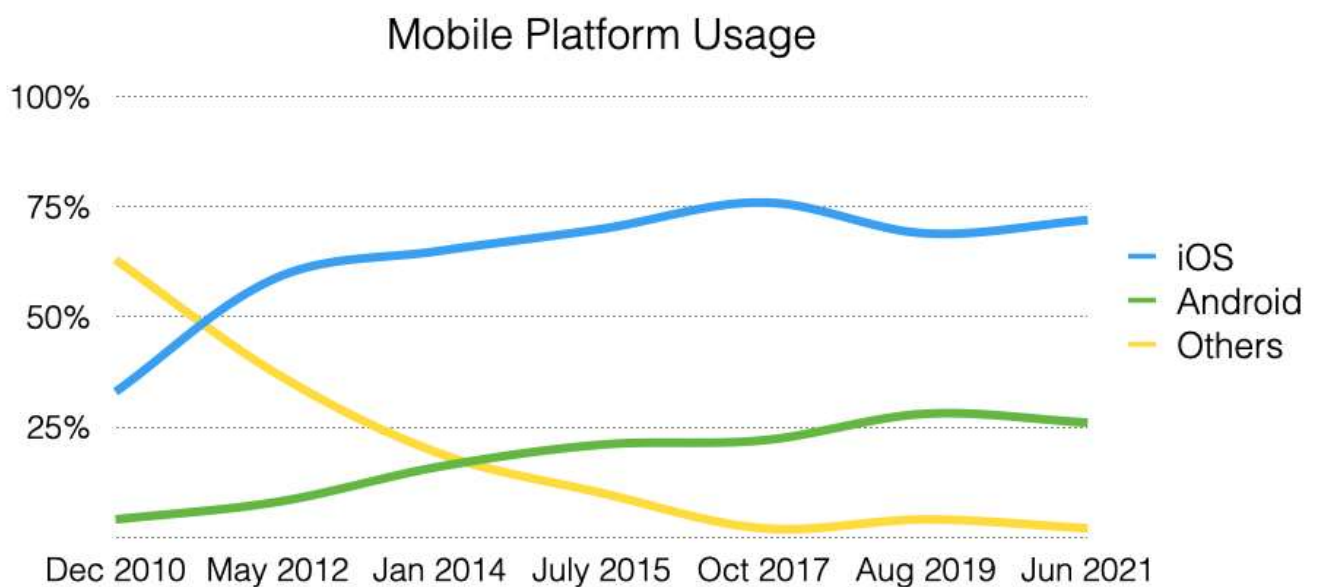


Decreases in usage in particular years likely reflect differences in the survey respondent demographics rather than an overall decrease in mobile screen reader usage.

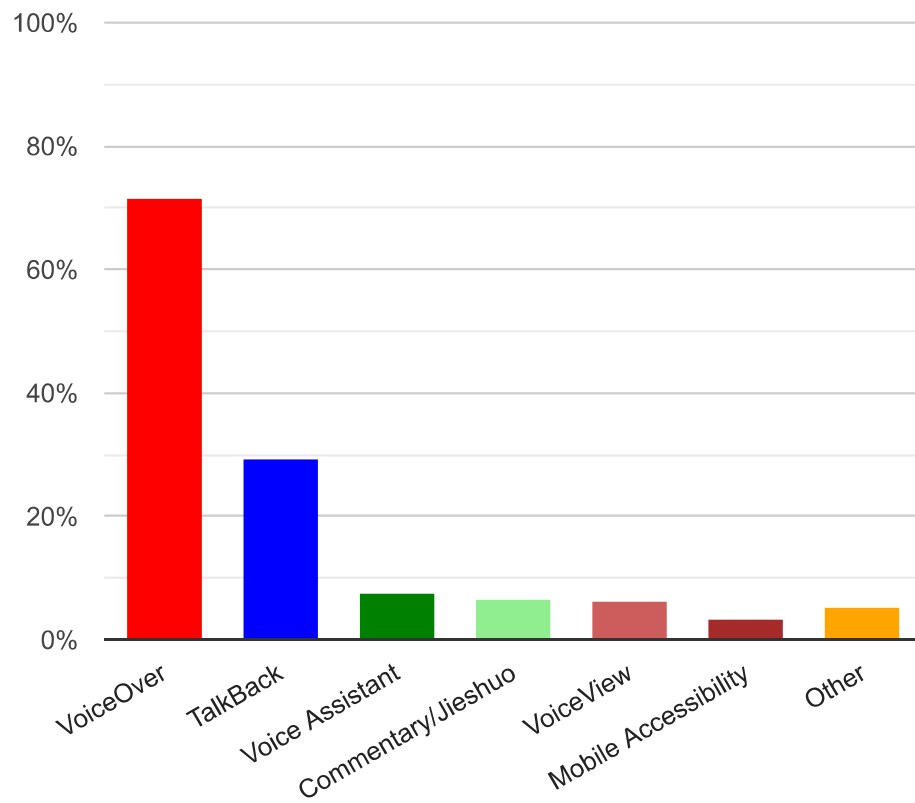
## Mobile Platforms



Respondents with disabilities used iOS devices at a higher rate than those without disabilities. Usage of iOS devices was significantly higher in North America (82%), Australia (75%), and Europe/UK (71%) than in Africa/Middle East (54%), South America (33%), and Asia (27%). Respondents with more advanced screen reader and internet proficiency were much more likely to use iOS over Android.



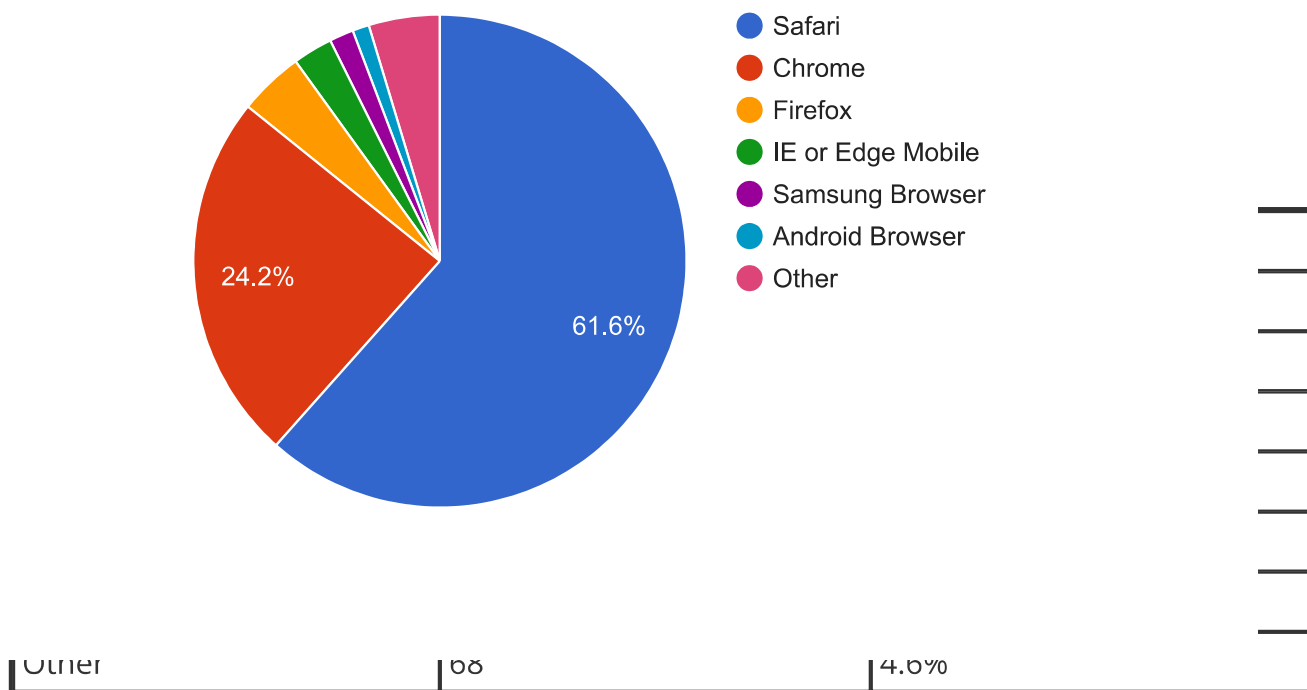
iOS devices continue to dominate the mobile screen reader market. Usage of other platforms (Chrome OS, Windows Phone, Nokia, etc.) combined represent only 2.3% of usage.



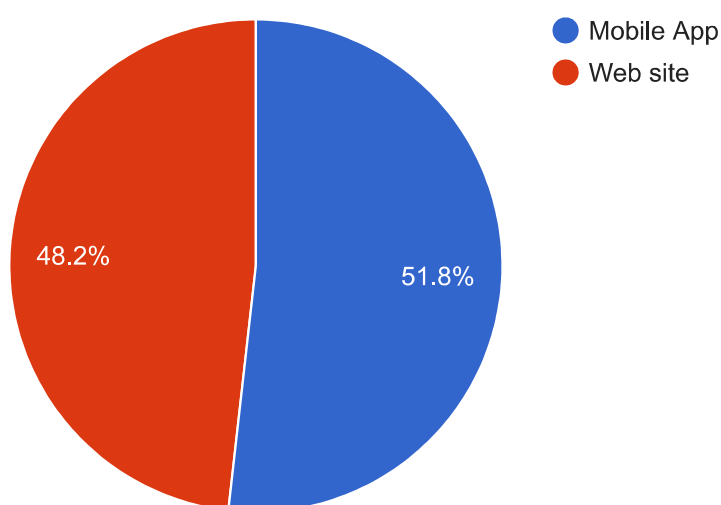
TalkBack	29.1%
Voice Assistant	7.6%
Commentary/Jieshuo	6.6%
VoiceView	6.1%
Mobile Accessibility for Android	3.4%
Nuance Talks	1.0%
Mobile Speak	0.5%
IDEAL	0.4%
Other	3.4%

## Primary Mobile Browser





## Mobile App vs Web Site Usage



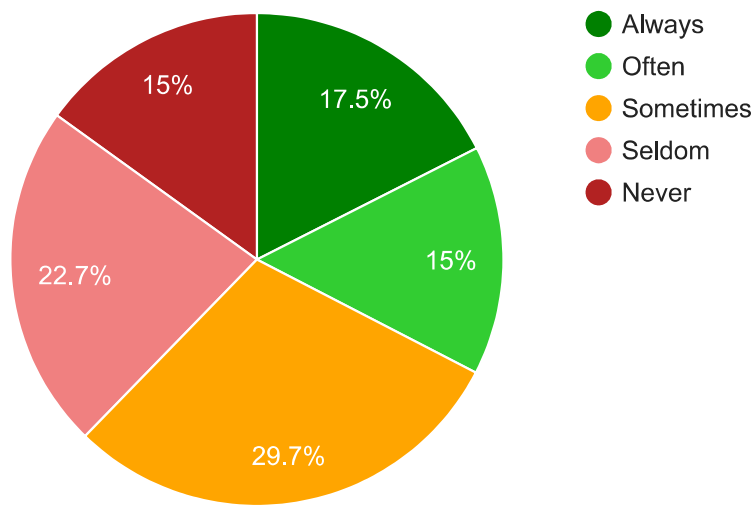
When performing common online tasks such as banking or shopping are you most likely to use a mobile app or the web site?

Response	# of respondents	% of respondents
app	781	51.8%
web	727	48.2%

Respondents indicated that they are slightly more likely to use a mobile app than a web site for common online tasks. The preference for mobile app usage increased to 51.8% in 2021, up from 50.8% in 2019 and

46% in 2017.

## "Skip" links

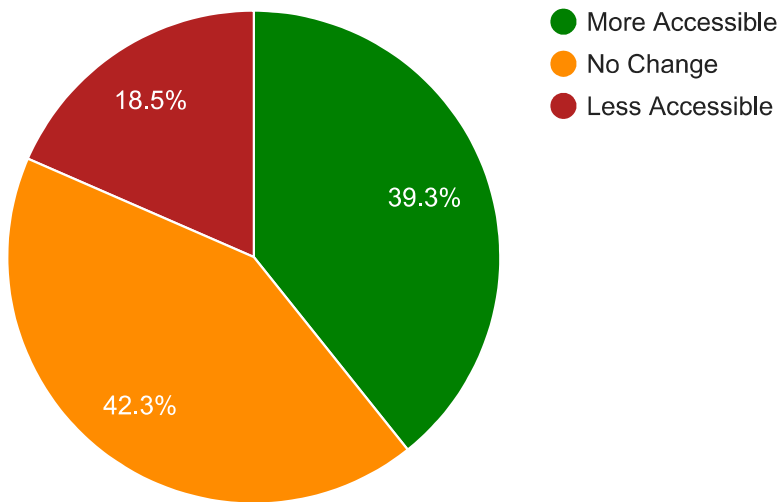


When a "skip to main content" or "skip navigation" link is available on a page, how often do you use it?

Response	# of respondents	% of respondents
Always	260	16.8%
Often	223	14.4%
Sometimes	440	28.4%
Seldom	336	21.6%
Never	223	14.4%

Usage of "skip" links is [largely unchanged since 2017](#). It's important to note that "skip" links provide distinct benefits for sighted keyboard users, even if their usage among screen reader users is mixed.

## Web Accessibility Progress



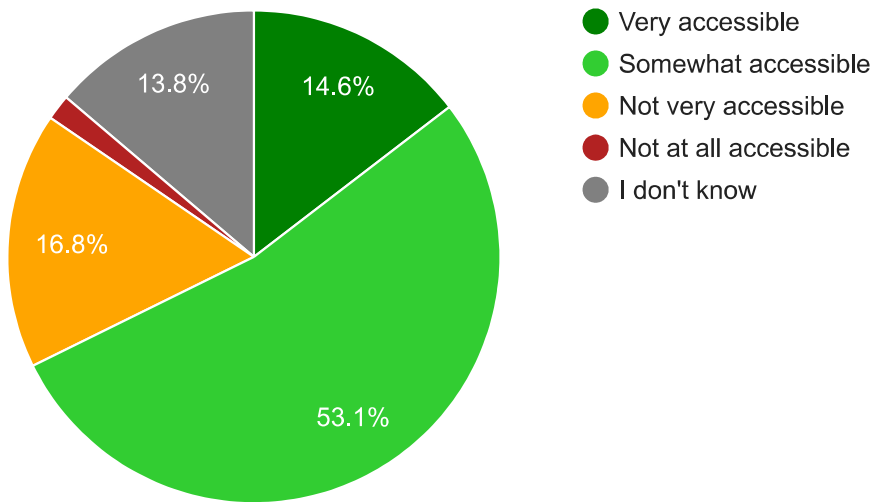
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those with disabilities (38.6% thought it has become more accessible).

## Social Media Accessibility

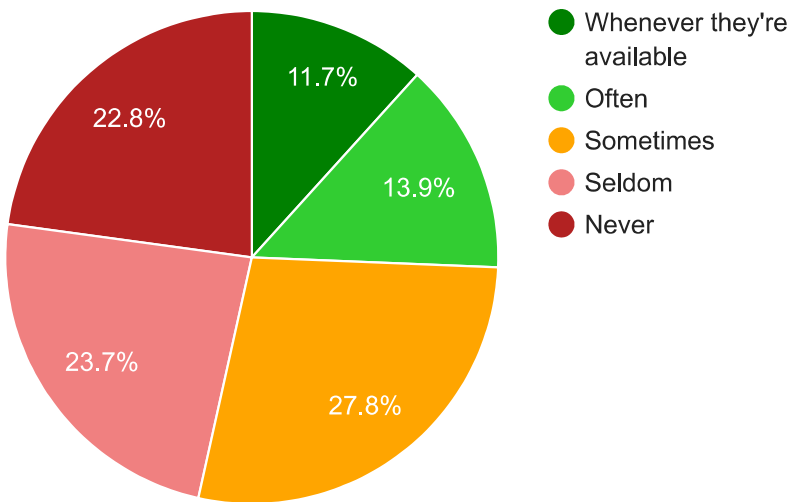


In general, how accessible are social media web sites to you?

Response	# of respondents	% of respondents
Very accessible	218	14.6%
Somewhat accessible	793	53.2%
Not very accessible	251	16.8%
Not at all accessible	25	1.7%
I don't know	206	13.8%

Perceptions of social media accessibility are generally unchanged over the last several years.

## Landmarks/Regions

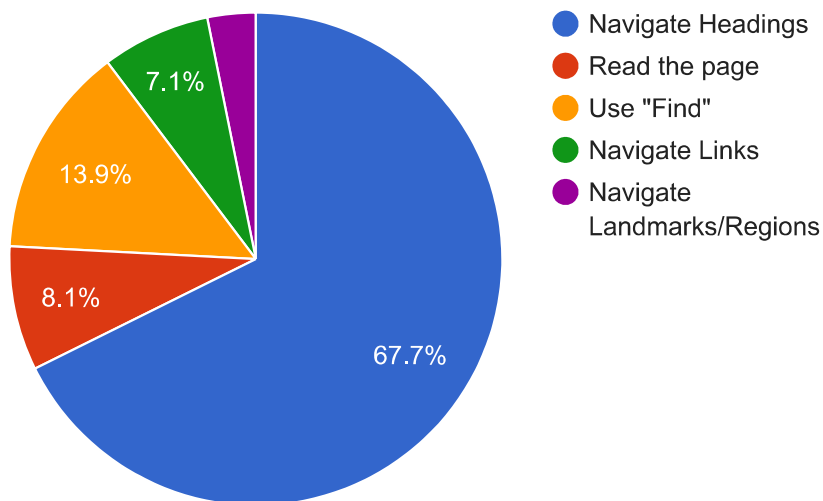


How often do you navigate by landmarks/regions in your screen reader?

Response	# of respondents	% of respondents
Whenever they're available	180	11.7%
Often	214	13.9%
Sometimes	428	27.8%
Seldom	364	23.7%
Never	351	22.8%

The frequent use of landmarks and regions has continually decreased from 43.8% in 2014, to 38.6% in 2015, to 30.5% in 2017, to 26.6% in 2019, to 25.6% on this survey. It's difficult to know the reasons for this. It could be due to infrequent or improper usage of landmarks/regions in pages. Or perhaps because other mechanisms are continually better.

## Finding Information



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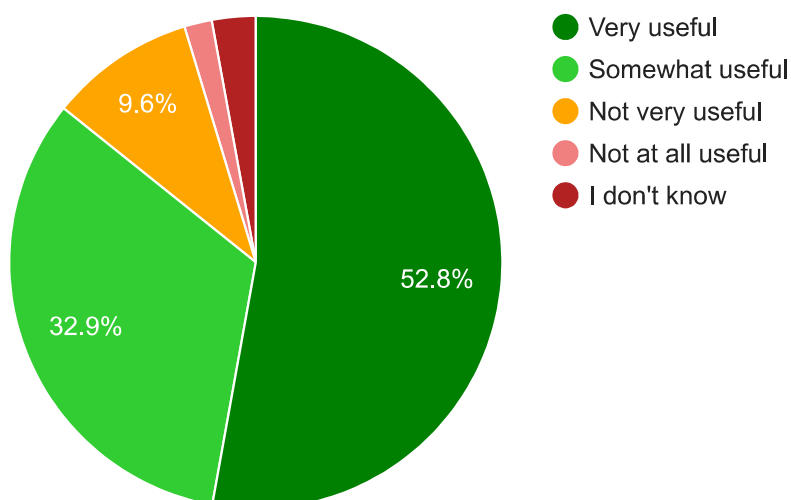
ndents

Navigate through the landmarks/regions of the page	49	3.2%
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Navigating headings remains the predominant method for finding page information. Those with advanced screen reader proficiency are much more likely to use headings (76%) than those with beginner proficiency (41%), who are more likely to read through the page or use the "Find" feature.

While 25.6% of respondents indicate that they always or often use landmarks when they are present, only 3.2% use this as a primary method for finding information on a lengthy web page.

## Heading Levels

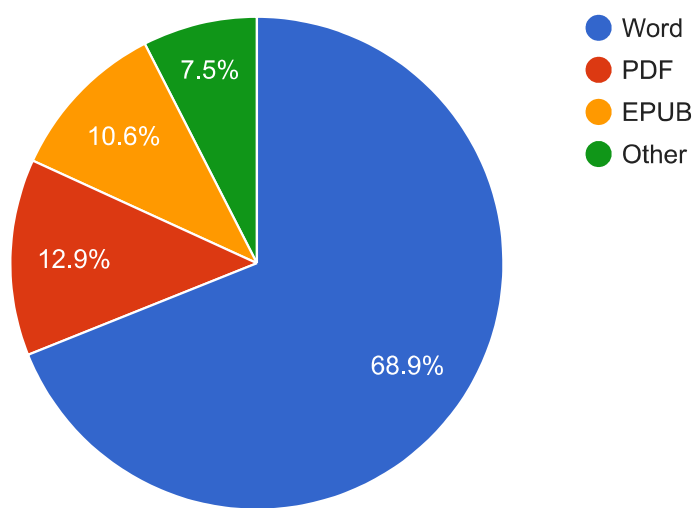


When navigating a web page by headings, how useful are the heading levels (e.g., "Heading 1", "Heading 2", etc.) to you?

Response	# of respondents	% of respondents
Very useful	813	52.8%
Somewhat useful	507	32.9%
Not very useful	147	9.6%
Not at all useful	28	1.8%
I don't know	44	2.9%

The usefulness of proper heading structures is very high, with 85.7% of respondents finding heading levels very or somewhat useful.

## Document Accessibility

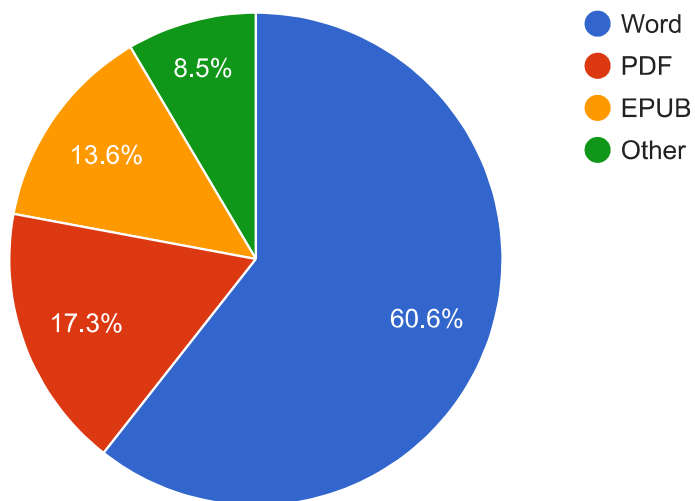


Which document format do you find most accessible?

Response	# of respondents	% of respondents
Word	1036	68.9%
PDF	194	12.9%
EPUB	160	10.6%
Other	113	7.5%

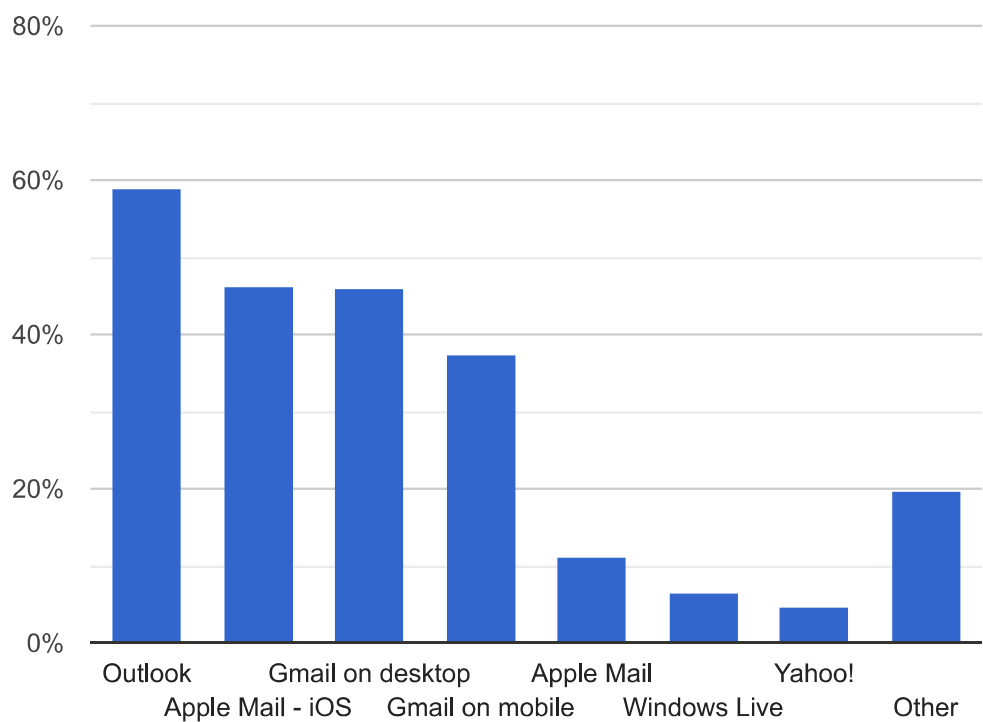
Respondents to the [2019 survey reported much higher levels of accessibility issues with PDF documents than with Word documents.](#)

## Document Preference



PDF	261	17.3%
EPUB	204	13.6%
Other	128	8.5%

# Email clients



Which of the following email clients do you commonly use?

Response	% of respondents
Outlook or Outlook.com	59.0%
Apple Mail on iOS	46.3%
Gmail with desktop browser	45.9%
Gmail on mobile	37.4%
Apple Mail on Mac	11.2%
Windows Live Mail	6.6%
Yahoo!	4.6%
Other	19.8%

Many respondents commented that they use Mozilla Thunderbird which was not provided as a response option on the survey.