Screen Reader User Survey #3 Results

Translations

Translations of this article are available in:

- Simplified Chinese - External Link - courtesy of Jace Lee.

Introduction

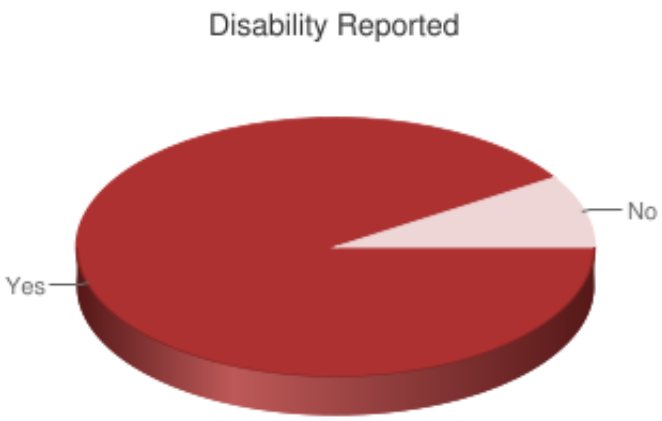
In December 2010, WebAIM conducted a survey of preferences of screen reader users. This was a follow-up survey to the original WebAIM Screen Reader User Survey of January 2009 and the follow-up survey from October 2009. We received 1245 valid responses to this survey (1049 English, 101 Spanish, 91 French, and 4 Portuguese responses).

A few disclaimers and notices:

- Totals may not equal 100% due to rounding.
- Total responses (n) for each question may not equal 1245 due to respondents not answering that particular question.
- The sample was not controlled and may not represent all screen reader users.
- Data was analyzed using JMP Statistical Discovery Software version 8.
- We hope to conduct a survey of this nature again in the future. If you have recommendations or questions you would like asked, please let us know.

Demographics

Disability Reported

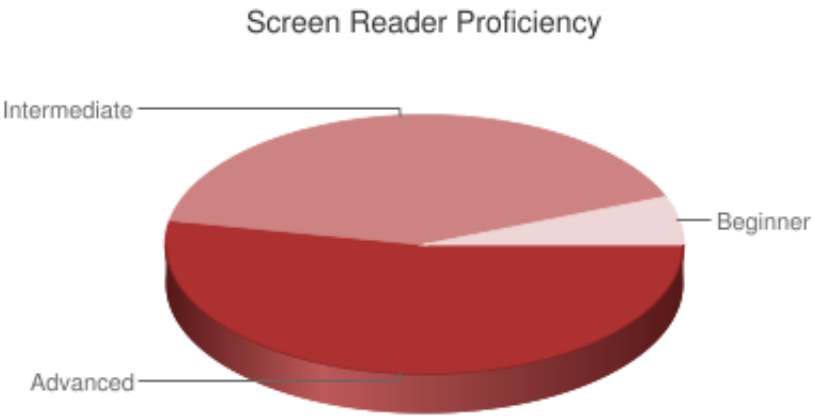


Do you use a screen reader due to a disability?

Response	# of Respondents	% of Respondents

Yes	1107	91%
No	111	9%

Screen Reader Proficiency

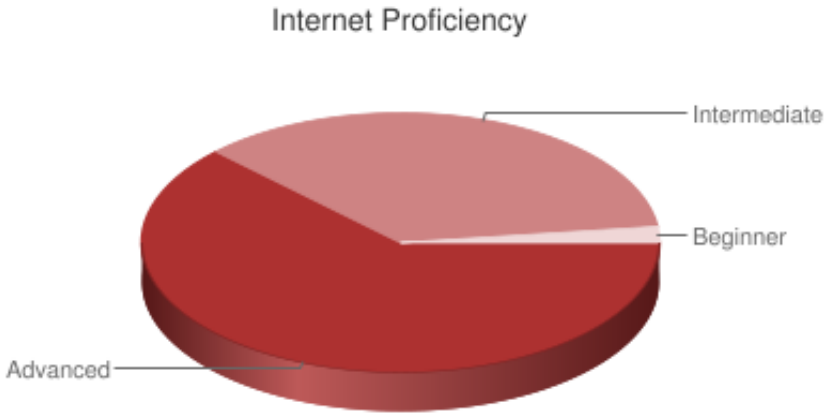


Please rate your screen reader proficiency

Response	# of Respondents	% of Respondents
Advanced	644	52.6%
Intermediate	504	41.2%
Beginner	75	6.1%

Those who use screen readers due to a disability report themselves as being much more proficient with screen readers. 3% of those with disabilities considered their proficiency to be "Beginner" compared to 36% of those without disabilities.

Internet Proficiency

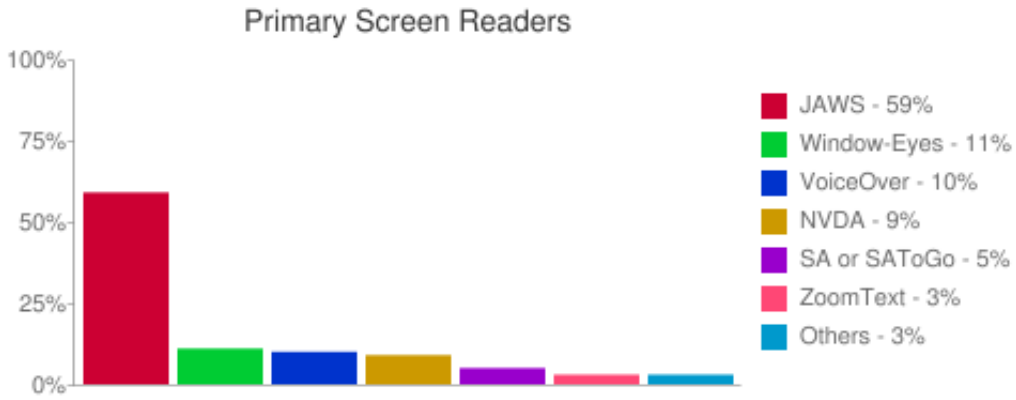


Please rate your proficiency using the Internet

Response	# of Respondents	% of Respondents
Advanced	765	62.5%
Intermediate	437	35.7%
Beginner	22	1.7%

61% of those who use screen readers due to a disability reported "Advanced" Internet proficiency compared to 86% of those without disabilities.

Primary Screen Reader

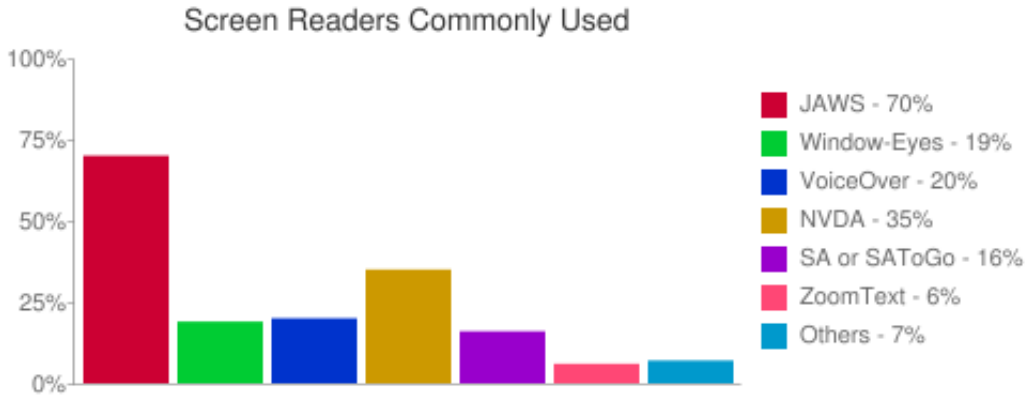


Which of the following is your primary desktop/laptop screen reader?

Screen Reader	# of Respondents	% of Respondents
JAWS	727	59.2%
Window-Eyes	138	11.2%
VoiceOver	120	9.8%
NVDA	105	8.6%
System Access or System Access To Go	58	4.7%
ZoomText	40	3.3%
Other	40	3.3%

Most notable is a significant decline in primary usage of JAWS - down to 59.2% from 66.4% as reported in October 2009. All other screen readers saw an increase in usage, with NVDA gaining the greatest ground with a nearly 300% increase in usage in 14 months. There was no marked difference in primary screen reader use between respondents with and without disabilities; however, those without disabilities were more likely to use NVDA (19.8% of respondents) than those with disabilities (7.6%). Those with a screen reader proficiency of "Beginner" were less likely to use JAWS and Window-Eyes and 3 times more likely to use NVDA than those with "Advanced" screen reader proficiency.

Screen Readers Commonly Used

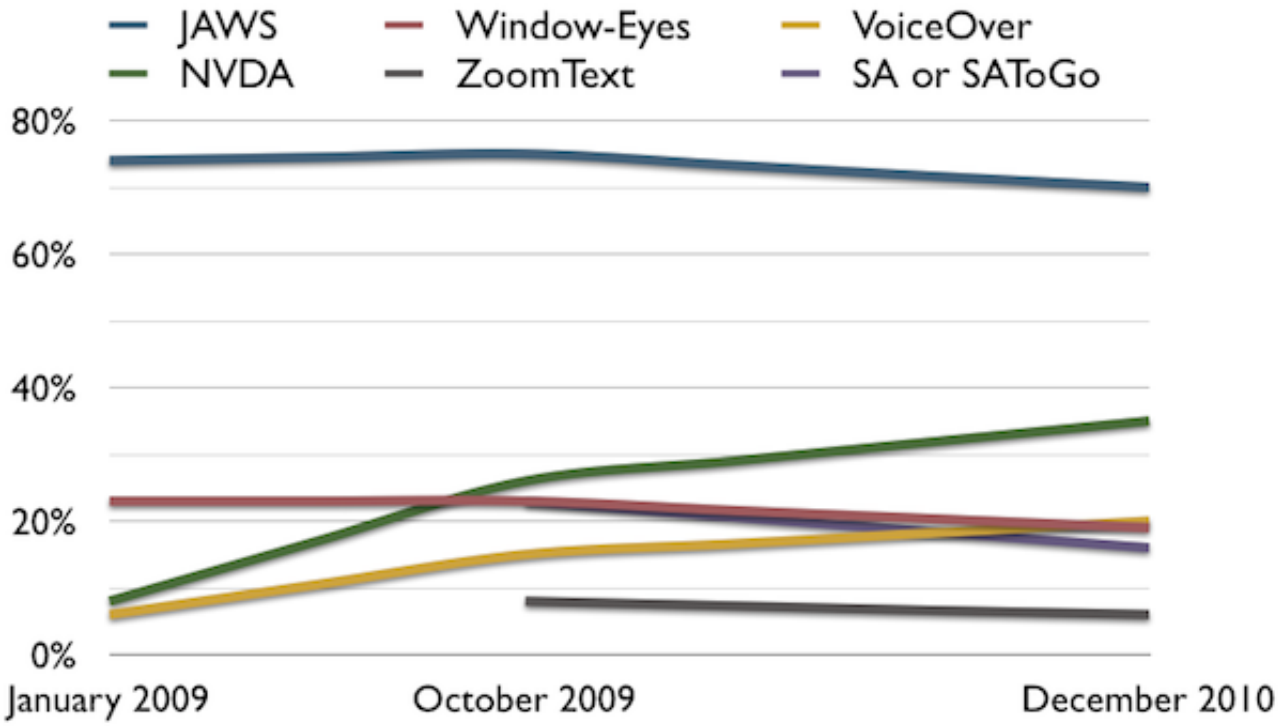


Which of the following desktop/laptop screen readers do you commonly use? (select all that apply)

Screen Reader	# of Respondents	% of Respondents
JAWS	866	69.6%
Window-Eyes	236	19.0%
VoiceOver	251	20.2%
NVDA	433	34.8%
System Access or System Access To Go	202	16.2%
ZoomText	76	6.1%
Other	92	7.4%

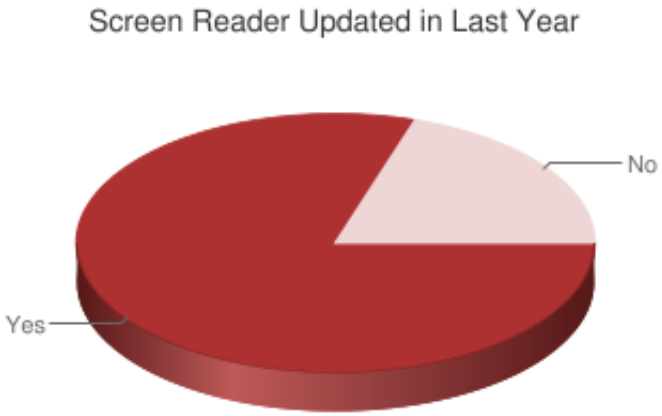
JAWS (75.2% to 69.6%), Window-Eyes (23.5% to 19.0%), and System Access (22.3% to 16.2%) saw decreases in usage since October 2009. VoiceOver (6% in January 2009 to 14.6% in October 2009 to 20.2% in December 2010) and NVDA (8% in January 2009 to 25.6% in October 2009 to 34.8% in December 2010) saw significant increases in usage.

The following chart shows changes in screen reader usage over time.



47% of respondents commonly use more than one screen reader, 20% use more than two, and 7% use more than three screen readers.

Screen Reader Updates

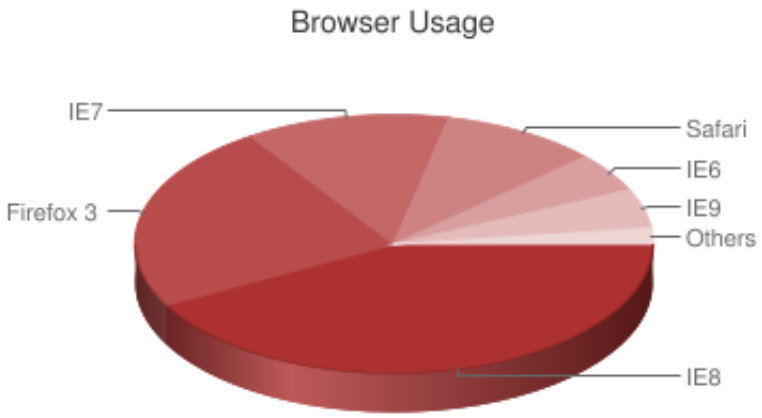


Has your primary screen reader been updated in the last year?

Response	# of Respondents	% of Respondents
Yes	961	80%
No	241	20%

The vast majority of respondents updated their primary screen reader within the previous year. This is slightly higher than the 75% who reported updating within a year in January 2009, but slightly lower than the 83.6% who reported the same in October 2009. It's important to note, however, that many users may still be using screen readers that are several years old.

Browsers

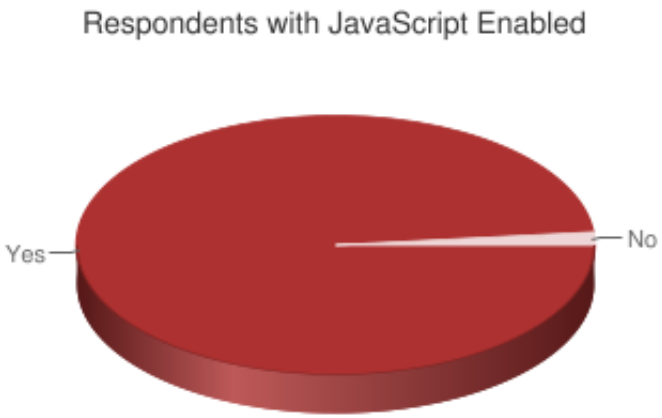


When using your primary screen reader, which browser do you use most often?

Browser	# of Respondents	% of Respondents
Internet Explorer 8	522	43.1%
Firefox 3+	285	23.5%
Internet Explorer 7	151	12.5%
Safari	116	9.6%
Internet Explorer 6	63	5.2%
Internet Explorer 9	54	4.5%
Others	20	1.7%

Internet Explorer accounts for 65.3% of the browser share among respondents. At the time of publication, this is significantly higher than that of the general population. When compared to the October 2009 survey, Internet Explorer usage dropped from 70.9% whereas Firefox (18.8% to 23.5%) and Safari (8.3% to 9.6%) usage both increased. Those without disabilities were twice as likely as those with disabilities to use Firefox (43.7% compared to 21.8%) and much less likely to use Internet Explorer (47.6% compared to 66.5%).

JavaScript Enabled



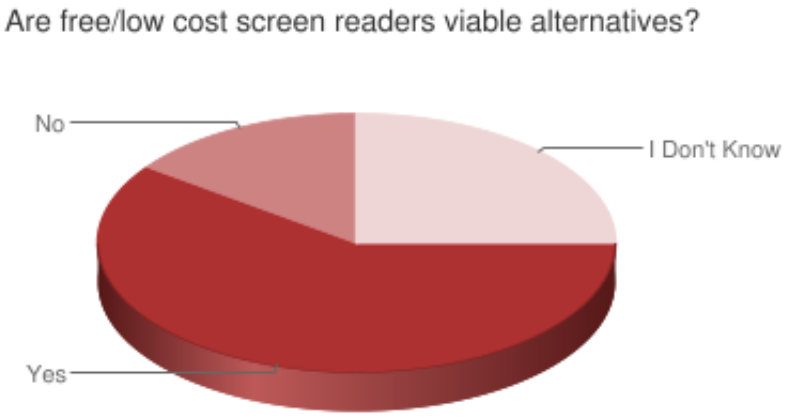
Respondents with JavaScript enabled

JavaScript Enabled	% of Respondents

Yes	98.4%
No	1.6%

10.4% of respondents to the October 2009 survey indicated that they have JavaScript disabled in their web browser. As respondents submitted responses to this survey we detected the presence of JavaScript. We found that very few respondents had it disabled or unavailable in their web browser. Of the 19 respondents with JavaScript disabled, 12 were using Firefox (presumably with the NoScript add-on enabled) and 5 were using Lynx with Linux.

Free/Low-cost Screen Readers



Do you see free or low-cost screen readers (such as NVDA or VoiceOver) as currently being viable alternatives to commercial screen readers?

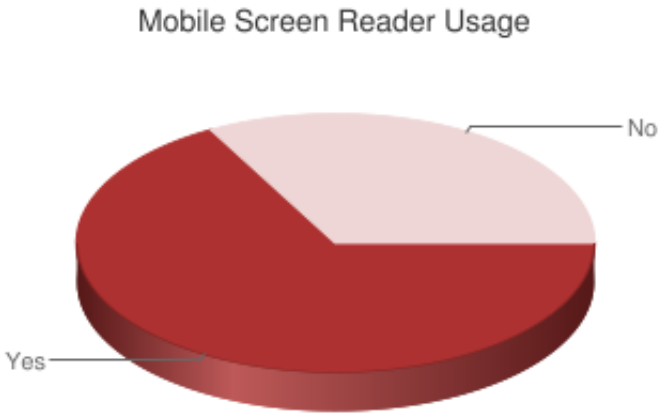
Response	# of Respondents	% of Respondents
Yes	752	60.4%
No	184	14.8%
I Don't Know	309	24.8%

47.8% answered "Yes" to this question in October 2009. The perception of free or low-cost screen readers seems to have improved.

Perhaps not surprisingly, 54% of JAWS users and 47% of Window-Eyes users answered "Yes" compared to an overwhelming 98% of NVDA users and 95% of VoiceOver users.

Mobile Screen Readers

Mobile Screen Reader Usage

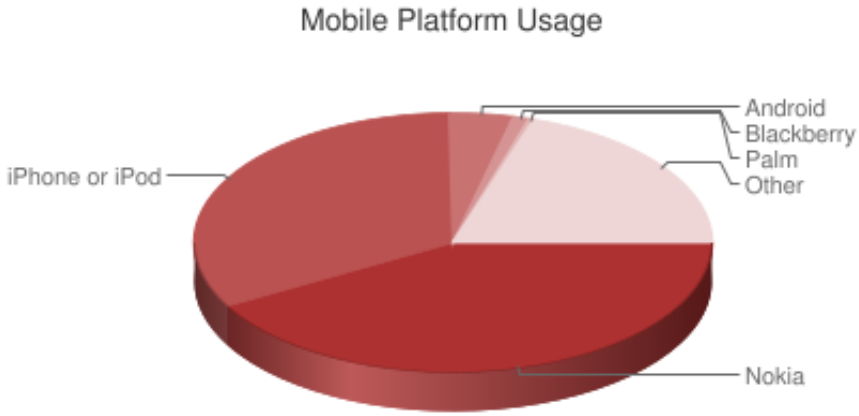


Do you use a screen reader on a mobile phone or mobile handheld device?

Response	# of Respondents	% of Respondents
Yes	796	66.7%
No	398	33.3%

This represents a 550% increase in mobile screen reader usage in under two years (only 12% reported using a mobile screen reader in January 2009) and a significant increase over the 53% that reported using a mobile screen reader in October 2009. Mobile screen reader use among those without disabilities is also much higher at 32% compared to just 8% in October 2009. Not surprisingly, more proficient screen reader users were more likely to use a mobile screen reader (79% of advanced users compared to only 26% of beginners), though the mobile screen reader usage by beginners was only 3% in October 2009, suggesting a broader adoption across screen reader users.

Mobile Platforms



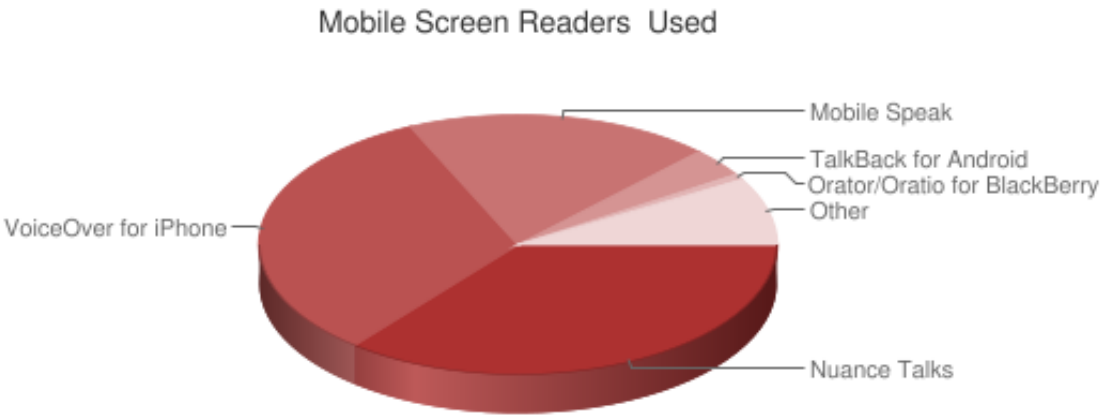
Which of the following is your primary mobile platform?

Mobile Platform	# of Respondents	% of Respondents
Nokia	400	42.4%
Apple iPhone or iPod touch	308	32.6%

Android	38	4.0%
Blackberry	10	1.1%
Palm	3	.3%
Other	185	19.6%

22% of those without disabilities use an Android device compared to only 2% of those with disabilities. Nokia usage was 3 times higher among those with disabilities than among those without disabilities. iPhone usage was largely the same among these populations.

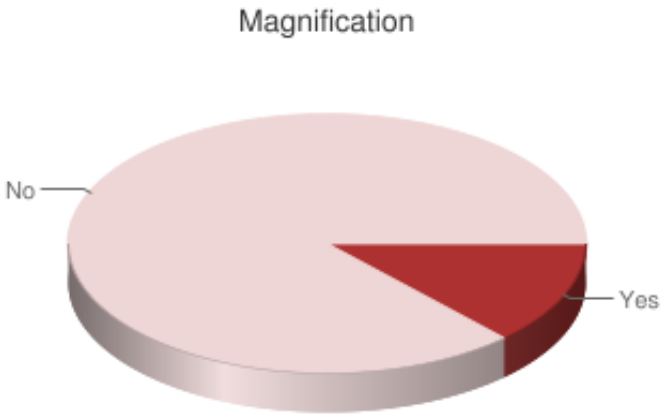
Mobile Screen Readers Used



Which of the following mobile screen readers do you commonly use? (Choose all that apply)

Mobile Platform	# of Respondents	% of Respondents
Nuance Talks	374	30.0%
VoiceOver for iPhone	338	27.1%
Mobile Speak	203	16.3%
TalkBack for Android	31	2.5%
Orator/Oratio for BlackBerry	8	.6%
Other	80	6.4%

Magnification

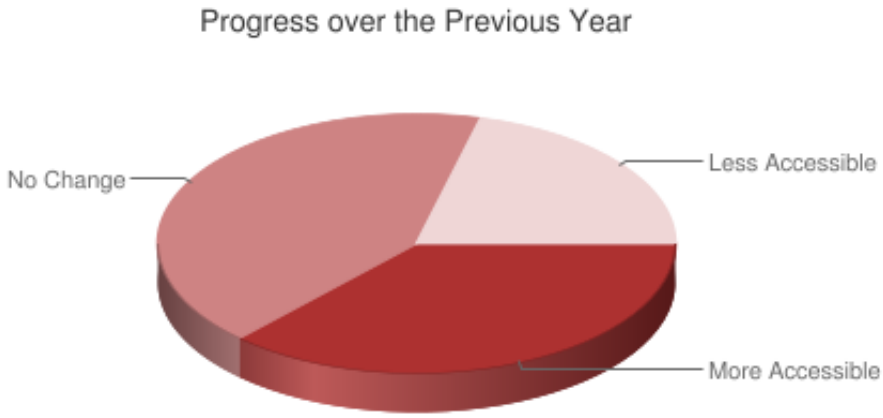


Do you commonly use screen magnification (dedicated screen enlarger, increased text sizes, page zoom, etc.)?

Response	# of Respondents	% of Respondents
Yes	146	12.8%
No	997	87.2%

Web Accessibility Progress

Previous Year



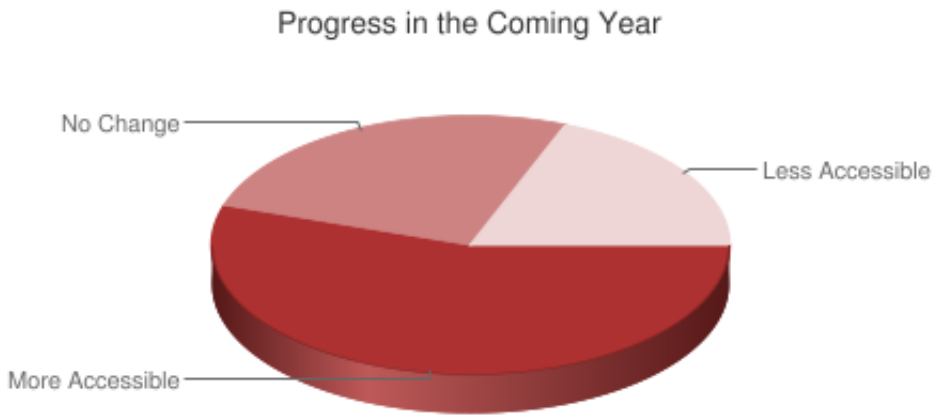
Which of the following best describes your feelings regarding the accessibility of web content over the previous year?

Response	# of Respondents	% of Respondents
Web content has become more accessible	440	37.2%
Web content accessibility has not changed	501	42.3%
Web content has become less accessible	243	20.5%

Respondents have become less optimistic in this regard - 46.3% responded that web content had become more accessible in the previous year when asked in October 2009, but

content had become more accessible in the previous year which asked in October 2009, but only 37.2% answered the same in December 2010. Only 4% of those without disabilities thought web content had become less accessible compared to 22% of those with disabilities.

Next Year

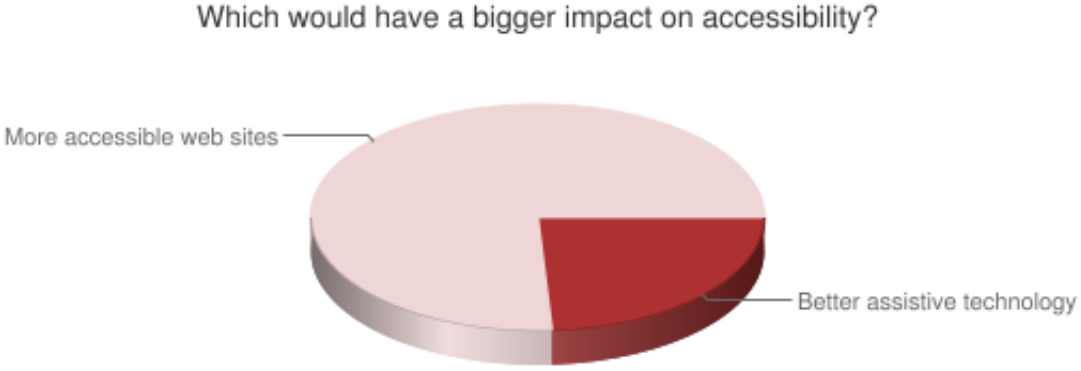


Which of the following best describes your outlook regarding the accessibility of web content over the next year?

Response	# of Respondents	% of Respondents
Web content will become more accessible	641	55.1%
Web content accessibility will not change	305	26.2%
Web content will become less accessible	218	18.7%

Despite a rather tepid response to progress over the previous year, respondents were generally quite optimistic regarding future progress. As shown above, those without disabilities were more optimistic about future web accessibility than those with disabilities.

Impacts on Accessibility



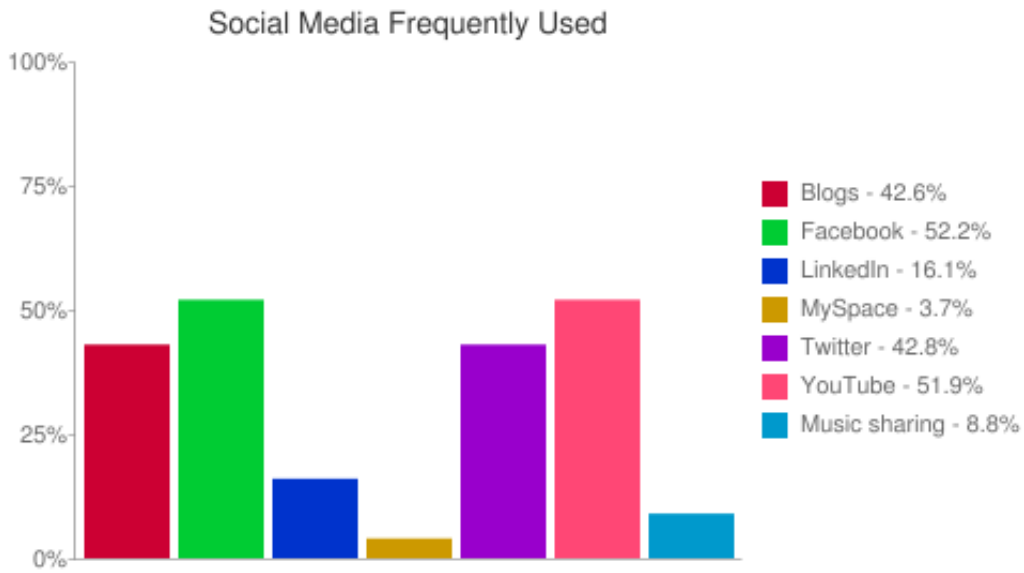
Which of the following do you think would have a bigger impact on improvements to web accessibility?

bigger impact on improvements to web accessibility?

Response	# of Respondents	% of Respondents
Better (more accessible) web sites	916	75.8%
Better assistive technology	293	24.2%

In October 2009, 68.6% of respondents answered "better web sites" to this question. This change perhaps reflects improvements to assistive technology or possibly the shift to other screen readers such as NVDA or VoiceOver. There was minimal difference between the responses based on disability, proficiency, or screen reader used.

Social Media

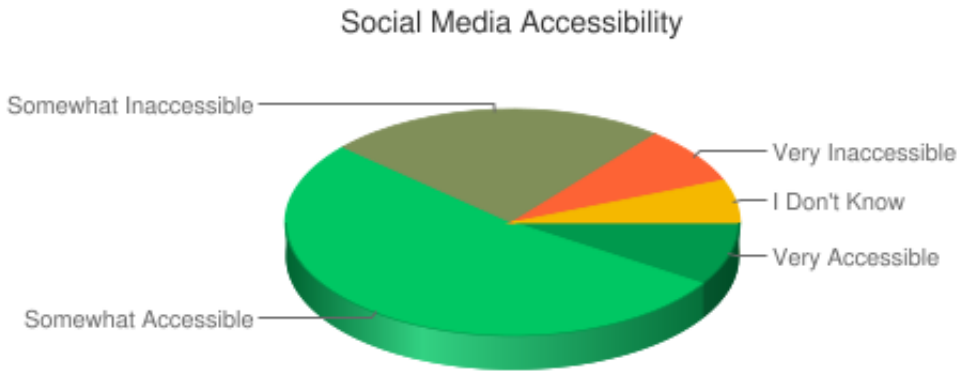


Which of the following social media sites or tools do you frequently use?

Social Media Tool	# of Respondents	% of Respondents
Blogs	531	42.6%
Facebook	650	52.2%
LinkedIn	200	16.1%
MySpace	46	3.7%
Twitter	533	42.8%
YouTube	671	51.9%
Music sharing sites	109	8.8%

Social media usage is largely unchanged since October 2009, with Facebook seeing an increase in usage from 42% to 52.2% of respondents. MySpace saw a decrease from 9% to 3.7%. Respondents without disabilities were somewhat more likely to use all of the social media tools listed.

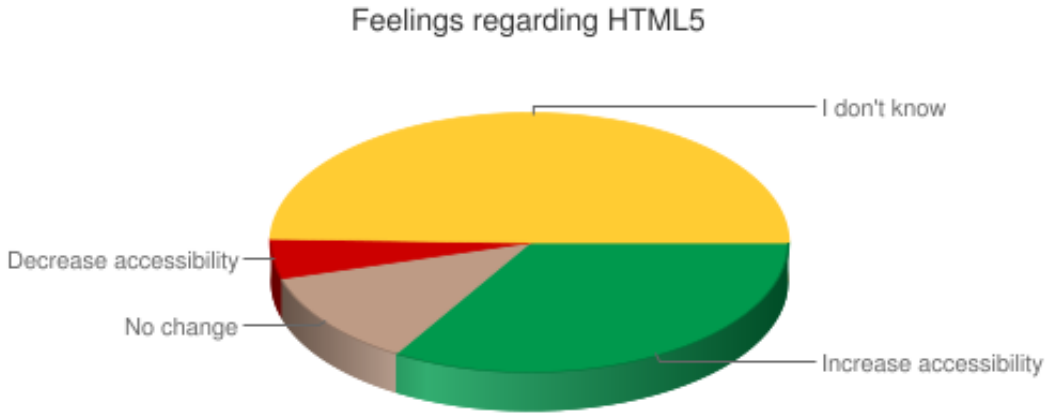
Social Media Accessibility



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

Response	# of Respondents	% of Respondents
Very Accessible	101	9.3%
Somewhat Accessible	567	52.3%
Somewhat Inaccessible	262	24.1%
Very Inaccessible	89	8.2%
I Don't Know	66	6.1%

HTML5

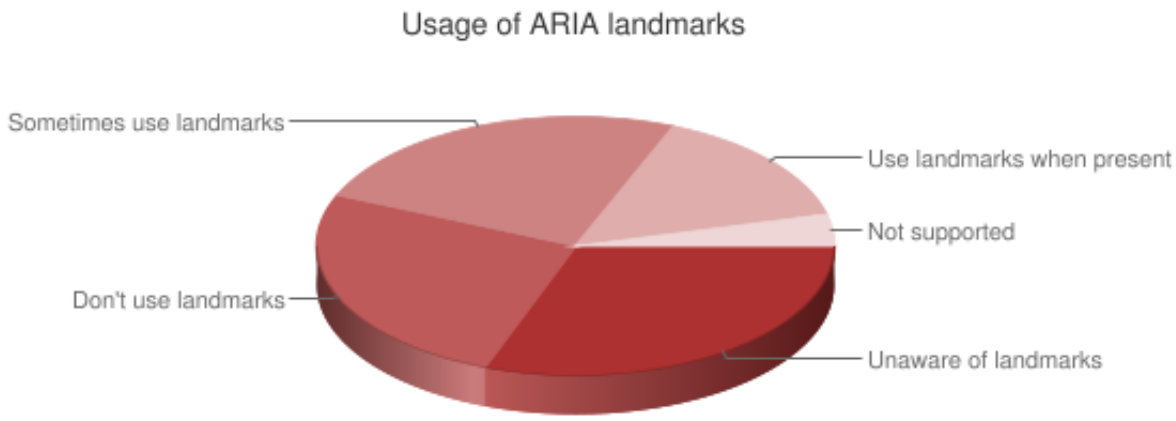


Which of the following best describes your feelings regarding HTML5?

Response	# of Respondents	% of Respondents
HTML5 will increase web accessibility	348	33.7%
HTML5 will not change web accessibility	119	11.5%
HTML5 will decrease web accessibility	55	5.3%
I don't know	511	49.5%

Nearly half of respondents didn't know their feelings regarding HTML5. Of those that expressed opinions, the majority have a positive outlook regarding HTML5. Respondents without disabilities were more optimistic - 47% answered that it will increase web accessibility compared to 32% of those with disabilities.

ARIA Landmarks

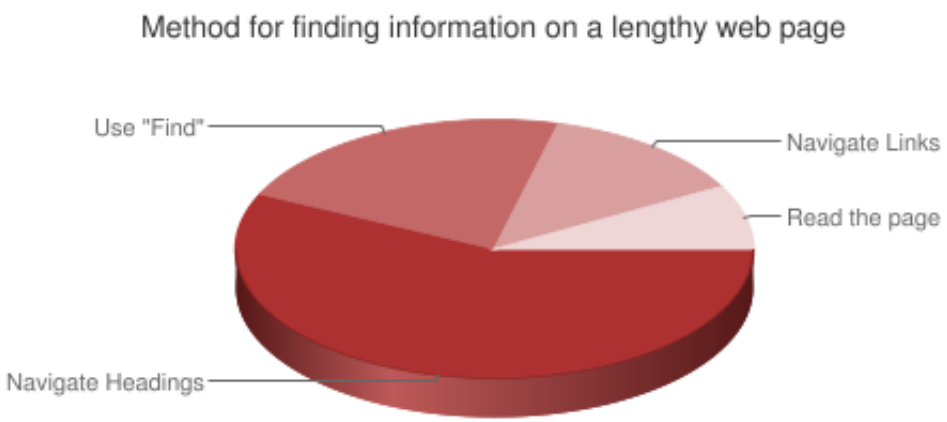


ARIA (Accessible Rich Internet Applications) introduces something called landmarks. These provide quick access to page areas, such as navigation, search, and main content. Which of the following best describes your use of landmarks?

Response	# of Respondents	% of Respondents
I didn't know this functionality existed	342	30.9%
I do not use landmarks for navigation	287	25.9%
I sometimes use landmarks for navigation	277	25.0%
I use landmarks for navigation whenever they are present	161	14.5%
My screen reader does not support landmarks	40	3.6%

Awareness of landmarks has increased - 42% were unaware of this functionality in October 2009. However, these data continue to show mixed levels of usage.

Finding Information

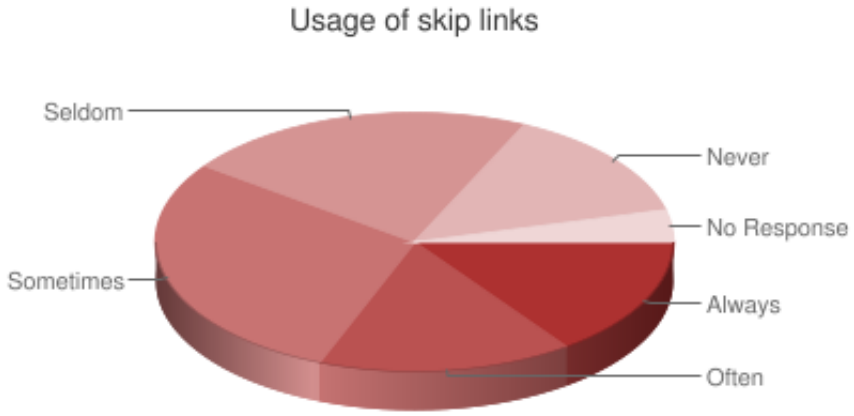


When trying to find information on a lengthy web page, which of the following are you most likely to do first?

Response	# of Respondents	% of Respondents
Navigate through the headings on the page	693	57.2%
Use the "Find" feature	261	21.5%
Navigate through the links of the page	155	12.8%
Read through the page	103	8.5%

The use of headings to find information has increased from 50.8% to 57.2% since October 2009, while all other methods saw decreases in use over this time period. These responses show the prevalent use of headings and underscore our previous findings which indicate that a good heading structure is a very important aspect of web accessibility and usability. Those with advanced screen reader proficiency are more likely to use headings over other methods (64% use headings) than those with beginner proficiency (44% use headings).

"Skip" Links



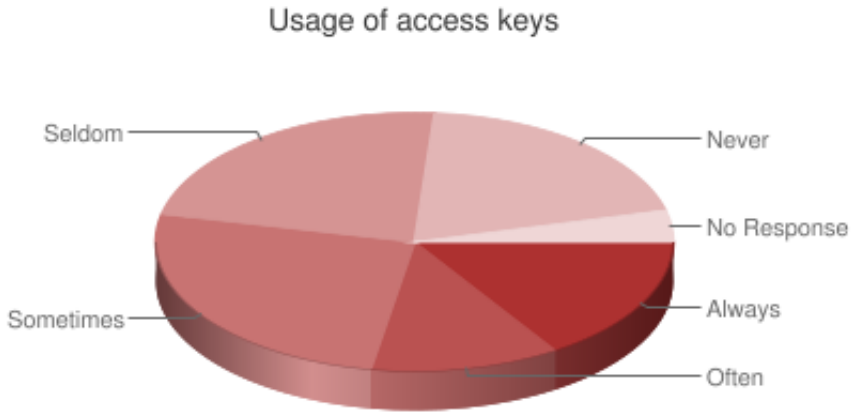
When a "skip to main content" or "skip navigation" link is available on a page, how often do you use it?

Response	% of Respondents	# of Respondents

Whenever they're available	189	15.2%
Often	202	16.2%
Sometimes	363	29.2%
Seldom	270	21.7%
Never	169	13.6%
No Response	52	4.2%

When compared to responses to the January 2009 survey, there has been a slight decrease in the usage of "skip" links. This may likely be due to increased usage of headings and landmarks for navigation as noted above.

Access keys



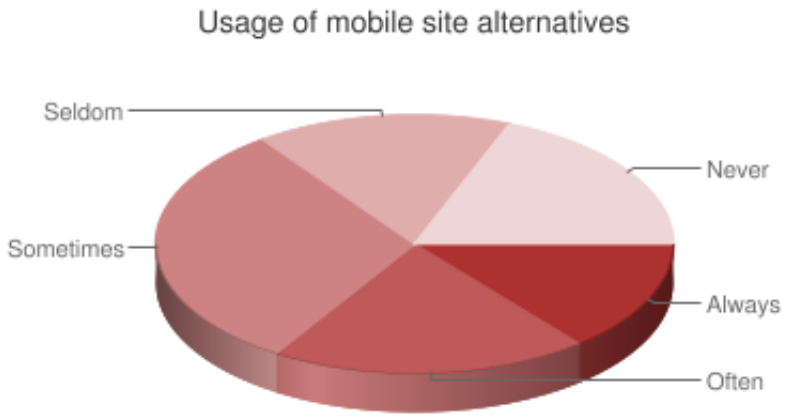
When access keys (keys defined by web site developers to provide page-specific shortcuts) are available on a page, how often do you use them?

Response	% of Respondents	# of Respondents
Whenever they're available	198	15.9%
Often	144	11.6%
Sometimes	328	26.3%
Seldom	282	22.7%
Never	245	19.7%
No Response	48	3.9%

27.5% of respondents indicate that they always or often use access keys, a decrease from 38% in the January 2009 survey.

Mobile Versions

Mobile Versions

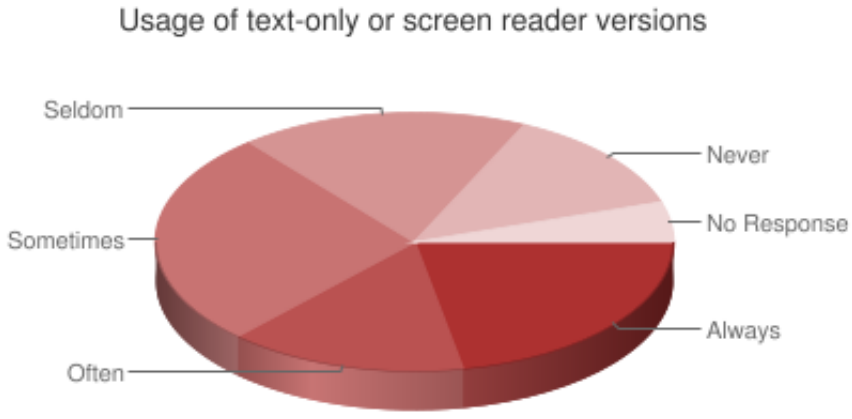


If a mobile version of a web site is available, how often do you use it instead of the standard web site?

Response	% of Respondents	# of Respondents
Whenever they're available	154	13.9%
Often	223	20.1%
Sometimes	340	30.7%
Seldom	176	15.9%
Never	214	19.3%

Using mobile versions of a site is more common among respondents who are less proficient with their screen reader.

Text-only or Screen Reader Versions



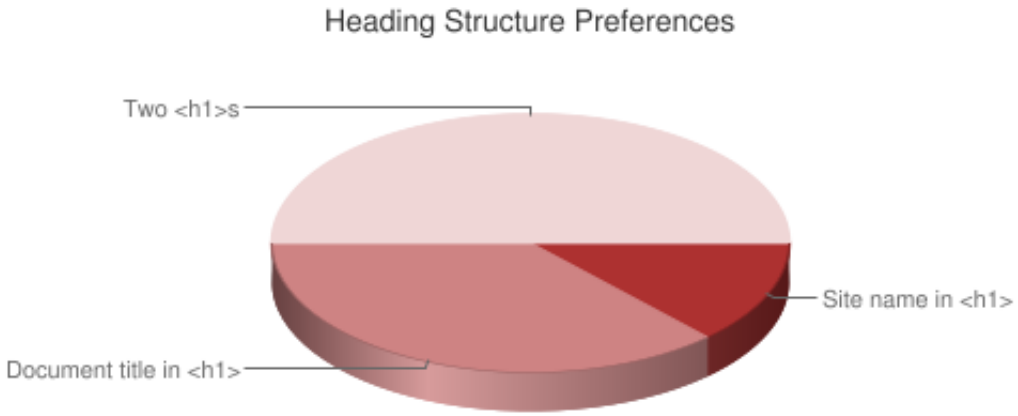
If a text-only or screen reader version of a web site is available, how often do you use it?

Response	% of Respondents	# of Respondents
Whenever they're available	272	21.9%

Often	191	15.3%
Sometimes	331	26.6%
Seldom	228	18.3%
Never	162	13.0%
No Response	61	4.9%

These responses are largely unchanged from responses to the January 2009 survey. Only 14% of those without disabilities reported using text-only or screen reader versions often or whenever they're available compared to 39% of those with disabilities. This may suggest that those with disabilities find greater usage in text-only or screen reader versions than those without disabilities might think or hope. Despite this, the fact that so many users seldom or never use such sites suggests that this approach to accessibility is not optimal.

Heading Structures

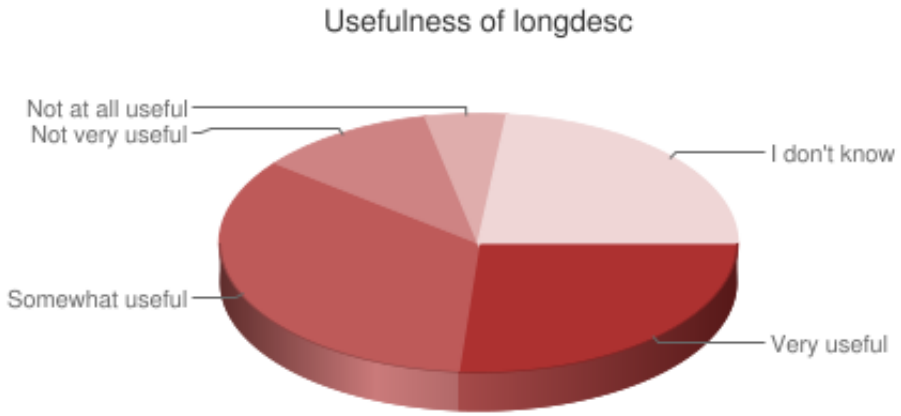


Which of the following page heading structures is easiest for you?

Response	% of Respondents	# of Respondents
One first level heading that contains the site name	136	12.5%
One first level heading that contains the document title	403	37.1%
Two first level headings, one for the site name and one for the document title	546	50.3%

These responses are of interest as the use of two <h1>s is generally at odds with most recommendations. Of note is that a single <h1> for the site name is by far the least desired.

Longdesc



How useful is longdesc (a method of providing a long description for complex images) to you?

Response	% of Respondents	# of Respondents
Very useful	286	26.2%
Somewhat useful	375	34.4%
Not very useful	123	11.3%
Not at all useful	59	5.4%
I don't know	247	22.7%

These responses show a strong usefulness of the longdesc attribute, which is currently under debate for omission from HTML5. Also of note is that 22.7% of respondents do not know the usefulness of longdesc, suggesting a need for better education or presentation of this functionality in screen readers.

Conclusion

The conclusion identified in the previous screen reader user surveys remains - *there is no typical screen reader user*. These results highlight significant changes and trends over a span of only 2 years, results that we hope will drive informed web accessibility practices.

A few items of note:

- JAWS is still the primary screen reader, but usage is decreasing as usage of NVDA and VoiceOver significantly increases.
- The perception of free or low-cost screen readers is improving.
- 98.4% of respondents had JavaScript enabled.
- The outlook for future web accessibility is optimistic.
- Two-thirds of the respondents use a screen reader on a mobile device, up from only 12% two years ago.
- Most respondents find longdesc useful.