

# Effective Screen Reader Use

**Leonie Watson**  
**Head of Accessibility, Nomensa.**

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What is like to be a completely blind screen reader user? Good Question.

It would be easy to talk about how difficult using a screen reader can be, but there is much to be said for such a powerful tool.

The Jaws screen reader uses a proprietary scripting language and the Microsoft Active Accessibility Layer (MSAA) to interact with the operating system. It functions well with the Windows environment, with both integrated and independent applications. But it is on the Web that Jaws truly comes into its own.

For example, it is possible to call up a list of links on a page, which can be viewed either by tab or alphabetical order. Links can be located by hitting the first letter of the link text and can then be activated directly or located on the page itself.

Page structure can be straightforward to understand. Hitting the H key when a page first loads takes the user to the first heading on the page. If the correct code has been used, the heading will be at level 1 and the user will know they are at the start of the main body content. Continuing to hit the H key cycles the user through all the headings on the page, stating the level of each one. Navigation between level headings is then possible by using the number keys.

Of course, it relies on good semantic code being used, but similar techniques can be used to move between paragraphs, quotations, tables, frames, lists and more.

If lists have been used effectively, even understanding site structure needn't be difficult. As the user cycles through nested lists, they can tell how many items are in the primary list, how many nested lists there are, how many items each of those lists contains and the level of the hierarchy where they are located. It becomes unexpectedly easy to appreciate the size, complexity and extent of the site.

Jaws uses three different modes to facilitate interaction with the computer. PC Cursor mode, which uses the keyboard for navigation, Jaws Cursor mode, which uses the arrow keys to move the cursor and Forms mode, which allows the user to enter data into forms on web pages.

Listening to, rather than reading, text produces a strange effect. The electronic voice of the screen reader is curiously flat and unemotive.

Jaws uses its ability to switch synthesizer voices to enrich the audio experience. Where a foreign language has been marked up correctly on a web page, Jaws can adopt the pitch, inflection and accent of that language.

It is also possible to assign different voices to key web elements. Links or headings may be read in one voice, whilst body text and alternate texts are read in another. This enables the screen reader user to experience an audio environment as rich and interesting as the visual experience for sighted users.

This only scratches the surface of the things a screen reader can do. With such an incredibly powerful tool at hand, it makes you wonder what all the accessibility fuss is really about.

With this kind of technology, a user should be able to go anywhere, do anything on the Internet. So what's stopping that? The answer is remarkably simple. The solid semantic code of web pages just isn't there to support them.

Without headings or lists, it is impossible to understand the structure of a page or site. Without correctly marked up quotations, languages or graphics, there is no enlivened audio experience. With no labelled forms, it's difficult to know what to put where. Navigating the web becomes awkward and difficult where there truly is no need.

If Web developers, technology makers and users can meet in the middle, there really is no reason why the user couldn't go anywhere, do anything and when all the right things happen in all the right places, it even becomes possible to forget there are barriers at all. That is the truly remarkable thing towards which we should all be working.