**New York City Mayor's Office for People with Disabilities Logo
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**MOPD: Screen Reader Reference Guide:**

This is a short guide on how to use Screen readers for the purpose of testing websites for accessibility. It includes information about screen readers, some common keyboard commands and further readings.

# **Screen readers:**

Screen readers are a type of assistive technology that use a synthetic voice to read contents of a screen to blind or low vision users. It is important to note that screen reader users interact by using either the keyboard or an external device. They do not use the mouse at all. Below are a few popular screen readers.

## Windows Screen Readers:

**Narrator**: The built-in screen reader for Windows. It’s not as popular or robust as the other options.

<https://support.microsoft.com/en-us/help/17173/windows-10-hear-text-read-aloud>

**JAWS:** A popular screen reader for Windows. It is expensive but robust.

<http://www.freedomscientific.com/Products/Blindness/JAWS>

**NVDA:** Also popular and it’s free/open source. It is not as robust and has a lower quality voice.

<http://www.nvaccess.org>

## Mac and iOS:

**Voiceover:** A popular screen reader that is built into every Mac computer and iOS device.

Mac: <https://help.apple.com/voiceover/info/guide/10.12/#/vo2682>

iOS: <https://support.apple.com/en-us/HT204390>

## Android and Chrome OS:

**Talkback:** A built-in screen reader for Android devices.

<https://support.google.com/accessibility/android/>

**ChromeVox:** A free screen reader for Chrome browser and Chrome OS.

<http://www.chromevox.com/>

# **Important Screen Reader Commands**:

The following commands can be used to test the accessibility of images, headings, tables, form fields, regions and keyboard access. Typically, JAWS, NVDA and Voiceover are used for testing websites.

Note: To enable Quick Nav on Mac, press the right and left arrows together. Single letter navigation must be enabled under Voiceover Utility/commanders/quicknav

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Command:** | **JAWS:** | **NVDA:** | **Voiceover(Mac):** | **Comments:** |
| Shortcut to turn on screen reader | Control, Alt and J | Control, Alt and N | Command and F5 or press finger print button 3 times on touch bar | For Jaws and NVDA the shortcuts need to be set in properties |
| Navigate up and down | Up or Down Arrows | Up or Down Arrows | Up and down arrows or Control, Option and Left or Right Arrows |  |
| Navigate by character | Left or Right Arrows | Left or Right Arrows | Control, Option, Shift and Left or Right Arrows |  |
| Go to the top of the page | Control and Home | Control and Home | Control, Option, Shift and Home |  |
| Go to the end of the page | Control and End | Control and End | Control, Option, Shift and End |  |
| Go to next image | G | G | Control, Option, Command and G or G with Quick Nav | Add Shift to move to previous image |
| Go to next heading | H | H | Control, Option, Command and H or H with Quick Nav | Add Shift to go to previous heading |
| Go to next table | T | T | Control, Option, Command and T or T with Quick Nav | Add Shift to go to previous table |
| Go to next form field | F | F | F, B or C with quick nav | Add Shift to go to previous form field. For Voiceover F goes to next Text field, B goes to next button and C goes to next checkbox with Quick Nav on |
| Go to next region | R | D | Custom command | Add Shift to go to previous region |
| Keyboard access | All links, buttons and form fields should be navigable using Tab | All links, buttons and form fields should be navigable using Tab | All links, buttons and form fields should be navigable using Tab | For Mac, some Safari settings might need to be adjusted for this to work |

# Resources:

Web Content Accessibility Guidelines(WCAG) 2.0:

<https://www.w3.org/TR/WCAG20/>

Web Accessibility Initiatives Tutorials:

<https://www.w3.org/WAI/tutorials/>

Screen reader testing online accessibility program:

<https://soap.stanford.edu/tips-and-tools/screen-reader-testing>

Webaim:

<http://www.webaim.org>

WAVE accessibility Checker:

<http://www.wave.webaim.org>