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Google Chromebook Accessibility Report

Chromebook

Tested on version 28.0.1500.68, Platform 4100.68.0, Firmware Google_Lumpy.2.111.0

Chromebook Interface

There is no Braille support on the Chromebook.

The Chromebook often reads out content that is not on the screen. This problem was present in various places, especially in Sheets and on the About page.

The "Downloads Folder" is now accessible to ChromeVox users. However, ChromeVox will sporadically read parts of the folder as number of chunks of garbage text that sound like "pace" (best guess).

There is now an audible warning for the battery going low. It remains on screen for sighted users. This message appeared at 6% and was spoken for the last time at 3%.

When the Chromebook is updating software, there is no automatic indication of the fact that it is ready to be restarted to apply the updates.

There is no indication that the Chromebook has turned on and is ready to be logged into when it is restarted, nor is there an audible notification that the system is shutting down. If speech is failing to work for any reason, a blind user will not even have an indication that the machine is on.

A blind user cannot use non-Google formats on the Chromebook. (Docx, Excel, PDF).

Users who have dexterity issues, such as one-handed users, or those with cerebral palsy, would find it very difficult to successfully complete a number of key commands, such as CTRL-ALT-A followed by L (The command for finding the cursor location in a document). This problem is

exacerbated by the fact that all CTRL-ALT commands have to be completed with the left hand CTRL-ALT keys as the right hand keys do not seem to work for completing these commands.

When a menu item is unavailable, a blind user still needs to see what it is, and what its state is, as otherwise navigating the menus may cause confusion by starting on "3 of 8". I.e. "cut grayed", or "cut unavailable".

Menu options need to be read before keyboard shortcuts. When users are in the menus, they will always want to know what action they are about to perform, and will sometimes want to know how to perform it without going to the menus. Right now, they have to listen to the information they only want some of the time (keyboard shortcuts) to get the information they need all of the time (menu options), and since they have to wait through each keyboard shortcut announcement, if they are looking for an unfamiliar command, it could take much longer for them to find what they are looking for.

When cycling through different keyboard modes (Shift-Alt), there is no nonvisual indication of the keyboard type that is selected, even as the changes are (visually) reflected on the screen.

ChromeVox

The voice is much improved in the latest update to the system, and is more understandable. However, there are still times when a user cannot be sure of what they are hearing, specifically when dealing with the similar sounding characters, b, d, e, p, or t for instance, which is a problem as there appears to be no way to have a character read out phonetically at this time. This, coupled with the lack of Braille support, can make the Chromebook unusable for those with hearing loss, some non-native English speakers, and others.

ChromeVox occasionally loads in an extremely buggy state, where it will read pages that are not visibly present on the screen, or will skip crucial sections of text or other elements. The reason for these errors has not yet been determined, though they seem to occur more frequently than in other screen access packages and are often more severe, requiring the user to fully restart their system to repair the error.

Speech will sometimes drop out for no discernible reason.   In an attempt to restore speech during testing, we used CTRL-L (open address bar), ALT-F (file menu). CTRL-N (new browser), CTRL-ALT-Z (toggle spoken feedback), CTRL-TAB (switch between open browser tabs), and CTRL-F1 or CTRL-F2 (cycles between different portions of the desktop). None of these commands restored speech. During testing we had to resort to visual verification of what was happening on the screen while powering the device on and off in order to get signed back in.

There is no indication (auditory or spoken) that the machine is loading anything, which makes it difficult to tell when the speech is hung, and when the machine simply has nothing to report because it is loading a webpage.

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There is no indication of when a user should use ChromeVox commands, and when the user should use application commands. For instance, a user should use ChromeVox commands for navigating the Drive page, but not in Google Docs, unless they are in a dialog box (such as sharing or e-mailing a file) in their document, in which case they should use ChromeVox commands to navigate.

Table commands were not supported during the latest testing of the Chromebook. When they were attempted, ChromeVox recognized that a table was present, but could not be forced into table reading mode so that the table could be properly navigated. While attempting to use this page, browsing became less and less stable until many keystrokes were simply ignored. Even switching to the system tray would not work, and restarting the computer required a sighted user and the mouse. This did not appear to fix the browsing experience.

Drive

Navigating the file list in Google Drive is so inconsistent that a blind user will not necessarily know which file they have selected. If they are unable to even find and open the file they need, a blind student or professional cannot complete the tasks assigned to them.

When opening a document from Google Drive, it was available for access visually, but ChromeVox refused to read text aloud. It was discovered after a fair bit of working with the document that it was .docx format, and we were able to e-mail it to another person, but there was no indication to a blind user that this was not an editable file type, or that the text was unavailable.

When we attempted to open a document downloaded to the device, we received an error on screen that was not spoken. "Whoops, that wasn't supposed to happen. There was a problem with the content of this document." The text of this error was shaking back and forth.

A user is notified that someone has entered or exited a document that they are collaborating on, but there is no way to tell that the collaborator is editing the text, or where they are in the document. When a blind collaborator enters a document that is already being edited by a colleague, they are not given any indication that their colleague is already working with the document, possibly editing and making changes.

Reading tables in Google Docs does work with the provided table commands, but they are highly unintuitive and have to be learned by rote. For instance, CTRL-ALT T followed by B moves to the next column, and followed by V moves to previous column. Furthermore, this is completely unrelated to table commands provided for ChromeVox, so a blind user has to learn both sets of table navigation commands to use the Chromebook.

Text alignment is not read when a user queries for formatting information (CTRL-ALT A followed by S).

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The navigation prompt "use up and down arrow to navigate the files and folders list" does not actually give proper instructions as users who follow this direction when it is spoken will pass over the entire file list section of the page.

The "find cursor location" command only announces the page the cursor is on, which is not enough information. It should also announce the line the cursor is on, and perhaps how many characters it is into the line.

When fixing a misspelling, there is no verbal or audible indication that the fix has been applied.

PDF Viewer

The new file viewer "the new default" which is used to open files, including PDFs, appears to open files as images, even if they were created accessibly, such as the NFB annual report, and they are not readable with ChromeVox. This is the case despite the fact that a user can visually "search the document" so somehow, Google is able to read the contents of the file, but is not providing the information to ChromeVox.

For additional information, please contact Valerie Yingling, paralegal at the NFB at vyingling@nfb.org or 410-659-9314 ext. 2440.

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