**Ms. Kaseem, Teenager with deaf-blindness**

Ms. Kaseem uses the Web to find new restaurants to go to with friends and classmates. She is deaf and recently became legally blind too. In her case, this means she can see small portions of a screen, which allows her to read text when it is enlarged.

**More about Ms. Kaseemollapse this section**

At home, Ms. Kaseem uses the following combination of hardware and software to use the Web:

* screen magnification software to enlarge the text on websites to a suitable font size;
* screen reader software that displays text on the screen on a refreshable Braille device;
* large computer screen with high resolution and high luminosity (brightness).

She uses screen magnification to enlarge small portions of a web page on the entire screen. The magnifier also enlarges the mouse pointer on the display so that she can see it. When screen magnification is not sufficient, she uses a screen reader to drive the refreshable Braille display, which she reads slowly because she started to learn Braille only recently.

Ms. Kaseem also uses a portable electronic Braille notetaker when she is not at home. It is a small hand-held device with a refreshable Braille display that provides basic functionality such as note taking, calendar, e-mail, and web browsing. She has a device which also offers GPS, which she uses for orientation and to navigate around the city.

She often uses the website of her local public transportation service to plan her trips. However, the bus schedules get distorted when she enlarges the font because the text does not wrap and reflow properly. The schedules for the local train are in a different format that allows better enlarging. The local trains website also uses proper markup to indicate the page headings, column and row headings in tables, list items, links, form controls, and more. Her friend told her that this website was easier to use by others using a mobile phone too.

Ms. Kaseem found advice on [Contacting Organizations about Inaccessible Websites](http://www.w3.org/WAI/users/inaccessible) and notified the web team of the public buses website about the accessibility barriers she encounters on the website. She also explained how the website of the public trains works better for her and other mobile phone users and hopes she will soon get a response.

Draft revisions:

Kaseem is a teenager who is deaf and recently became legally blind too, which means she can see only small portions of a screen and read text when it is enlarged.

Kaseem uses:

* screen magnification software to enlarge the text on websites to a suitable font size;
* screen reader software that displays text on a refreshable Braille device;
* large computer screen with high resolution and high luminosity (brightness).

Kaseem’s portable electronic Braille notetaker includes a calendar, e-mail, web browsing, and note-taking functionality. Her mobile device includes GPS which helps her orient herself and navigate around the city. Kaseem uses the public transportation online site to plan her trips and view bus schedules, but encounters problems when she enlarges the text and it does not reflow or wrap properly, making the maps very difficult to use. She has a better experience viewing the train schedules that are properly marked up and allow text reflow. Kaseem found the web team contact information listed at the public transportation website and sent a message to the team informing them of the problems she encountered using their site. She also sent them the link to the train website and described how that site works better for her. She recently received an email message thanking her for her information and informing her that the public transportation web team plans to implement accessibility improvements in the launch of their new website.

For more information on implementing techniques that remove barriers for Kaseem, see the following resources:

**Sections related to Ms. Kaseemollapse this section**

**Diversity of web users:**

* [Deaf-blindness (Auditory disabilities)](https://www.w3.org/WAI/intro/people-use-web/diversity#auditory)
* [Deaf-blindness (Visual disabilities)](https://www.w3.org/WAI/intro/people-use-web/diversity#visual)

**Diversity in web use:**

* [Braille (Perception)](https://www.w3.org/WAI/intro/people-use-web/browsing#perception)
* [Refreshable Braille display (Perception)](https://www.w3.org/WAI/intro/people-use-web/browsing#perception)
* [Screen reader (Perception)](https://www.w3.org/WAI/intro/people-use-web/browsing#perception)
* [Text-to-speech (Perception)](https://www.w3.org/WAI/intro/people-use-web/browsing#perception)
* [Transcripts (Perception)](https://www.w3.org/WAI/intro/people-use-web/browsing#perception)
* [Customized fonts and colors (Presentation)](https://www.w3.org/WAI/intro/people-use-web/browsing#presentation)
* [Screen magnification (Presentation)](https://www.w3.org/WAI/intro/people-use-web/browsing#presentation)
* [Screen magnifier (Presentation)](https://www.w3.org/WAI/intro/people-use-web/browsing#presentation)
* [Descriptive titles, headings, and labels (Interaction)](https://www.w3.org/WAI/intro/people-use-web/browsing#interaction)
* [Helpful error and success messages (Interaction)](https://www.w3.org/WAI/intro/people-use-web/browsing#interaction)
* [Keyboard navigation (Interaction)](https://www.w3.org/WAI/intro/people-use-web/browsing#interaction)
* [Skip links (Interaction)](https://www.w3.org/WAI/intro/people-use-web/browsing#interaction)