New Technology Paves Way for Visually Impaired Internet Users to Improve Website Accessibility

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IBM today previewed a unique Social Accessibility collaboration software, developed by IBM Research, which allows Internet users to improve Web accessibility, particularly for those who are visually impaired.

The new collaboration software enables users with low or no vision to report Web content accessibility issues they faced on specific Web pages. In addition, any Internet users who wish to aid in improving Internet accessibility can respond to such requests from visually impaired users by using the tool to contribute alternative text to solve the reported issue.

"The Web has become an important infrastructure for society," said Chieko Asakawa, Distinguished Engineer in IBM Research. "Visually impaired users have been experiencing inconvenience in not having good alternative texts which are essential for screen reading software to tell them what's showing on a Web page to support navigation. To overcome the issue, we came up with an idea of creating a collaboration tool to, for the first time ever, allow visually impaired users and any Internet users who wish to participate in the Social Accessibility Project to work together to make an impact on improving Web content accessibility."

How It Works

For example, a visually impaired individual wants to find out what image is showing. The image shows a photo of Mount Fuji taken during sunset. Existing screen reading software may not obtain the same information as shown in the image, or a description of the photo is simply missing. Whenever visually impaired users face such difficulties, they can report that incident by using the collaboration tool developed by IBM Research and ask for adding an improved alternative text to describe the image.

The request then is automatically sent to a server hosting the Social Accessibility Project Website where visually impaired users and any Internet users who wish to take part in help improving Web accessibility will register themselves to use the collaboration tool. Internet users who are registered to the Social Accessibility Project can see this request on the project Website, and may decide to respond to this request by using the collaboration tool by clicking "start fixing it" button, and type a short description, such as "Photo caption: Mount Fuji during a gorgeous sunset." The short description will automatically be transformed to an external metadata. The next time any visually impaired person tries to revisit the Web page showing the photo image, screen reading software will read the alternative text from the metadata to give better explanation of what the photo shows.

Metadata consists of useful information such as description of the content and the physical location of the particular content. By having external metadata to reside at the Web server, Web content will remain unchanged while making the Web more accessible.

To further enhance the usability of Web content, the Social Accessibility Project Website offers an incentive mechanism where screen reading software users can rate the quality of external metadata provided by Internet users along with a comment to show their appreciation. Also, active users are listed at the project's top page to recognize their active participation on the project.

In addition, screen reading software users can place a landmark whenever they find an important position on a Web page, and other users can benefit from those landmarks to help reach important information easier and faster.

In order to encourage participation in the project, the Social Accessibility Project Website and collaboration tool are available free of charge on IBM alphaWorks Services website. To make Web content more accessible, it is vital to gain valuable feedback from screen reading software users to report issues with Web content accessibility. Leveraging the power of collaboration is vital to the project, and by placing the Website and software on alphaWorks, IBM expects to receive significant user feedback to help advance the project and the company's ongoing accessibility technology research.

To access Social Accessibility Project on alphaWorks, please visit: services.alphaworks.ibm.com/socialaccessibility/

Source: IBM

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