

Center for Accessible Information Research Alliance for Accessible Voting Final Project Summary

April 30, 2014

Project Summary

Accessible websites and documents

We were responsible for developing and maintaining an accessible project website, including a document library. While accessible item descriptions were promised, we only made a best effort to make documents and other items accessible. We also created a YouTube video channel for video relating to RAAV goals.

Accessible instructions for accessible voting machines.

We created a two-sided instruction card for the Automark ballot marking device, one of the most widely used accessibility devices used in polling places. We tested the instruction card in 26 precincts that had been using the Automark for several years.

Accessible language for ballot measures and voter guides.

We sampled a number of ballots from different jurisdictions, and used the voter guide published on line by M-Live for Michigan after assuring ourselves that its contents were equivalent to voter guides in jurisdictions across the country. We wrote "clear and simple" versions of the selected text samples and then had them reviewed and revised by a consultant with intellectual disabilities.

Machine translation of "clear and simple" voting materials.

After creating "clear and simple" English translations of the ballot measures and voter guides in the preceding phase of the project, we ran the translations through Google Translate to obtain versions in Spanish and Korean. Bilingual reviewers then evaluated the quality of the resulting translations.

Key Findings

- It is extremely difficult to get people to create documents that are ready for conversion to accessibility as defined in Section 508, and even more difficult to gain attention to other accessibility features described in the WCAG guidelines and material concerning "cognitive access".

- It is difficult to convert existing inaccessible documents to accessible pdf/word when the original document has complex tables and the associated text does not describe the table contents in reasonable detail. Even when converted, such documents present an extreme processing load to a reader using a screen reader or other audio access.
- There is a need for machine instructions, but it is too difficult to scan a densely printed instruction card to find needed information during the voting process. We replaced the card with a spiral-bound flip book, but this revision was not tested.
- There was no place to store the instruction card/book in the voting booth so that it was easily visible and manipulable.
- Many ballot and voter guide text samples scored above the college level for readability. We had little difficulty reducing the reading demand to the grade 8 level, but sometimes had difficulty getting to our target of grade 6.
- Machine translation of the readable materials failed in both languages. Spanish reviewers felt that many of the problems came from use of colloquialisms preferred by people with intellectual disabilities but challenging to the translation program. They felt that one could write a version that would translate adequately, but it might not be the one preferred by English-speaking people with disabilities. The Korean translation was a total failure. Most sentences were translated without any verbs, and the reviewers could not decipher the meanings of the text samples.

Recommendations and next steps

- There is a clear need for instructions for accessible voting machines located in the polling place. There needs to be a place to store the instructions in clear view. We believe that voting booths need redesign, both to allow for this and to allow voters to refer to completed sample ballots or other materials they bring with them to the polling place for reference during the voting process.
- Poll workers need more training in using the accessible technologies and in offering access to the technology to all voters.
- While federal agencies are already implementing accessibility guidelines (Section 508 compliance), there is a huge need for education of researchers, professionals, and the general public on the need for and creation of accessible documents, both print and digital.

We suggest that accessible products should be required of all contractors and grantees receiving federal support.

- It would be valuable to offer guidelines or tools to everyone creating materials to be read by voters to help make sure that what is written is readable and accessible to assistive technologies. The definition of readable needs clarification and general consensus. At present, too many people think it is simply a matter of print size.
- Low cost machine translation is not sufficient for translating voting materials into other languages. This technology is improving rapidly, and should be monitored for future use. In the meantime, though, it may be possible to create versions for translation into Spanish and other Indo-European languages. This possibility requires further research. It does not appear likely that the same can be done for non-Indo-European languages.