

Problem. Solved.



Accessible Voting Technology Initiative

May 9th, 2013

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Military Heroes Summary of Results



The needs of recently wounded service members and veterans are similar

Technology solutions will be ineffective without corresponding policy solutions

Newly injured service members have little to no experience with assistive technologies

Current accessibility solutions might not be optimal

Ballot design issues are at least as important as ballot delivery and marking issues

Characteristic injuries impact memory and attention

Complexity is a barrier for many

Need for further research to address needs of those with cumulative mTBI / TBI / PTSD injuries

AVTI Challenge



Collected data from users with disabilities, voting system testing vendors, voting system designers, voting data exchange experts (P1622), and election officials

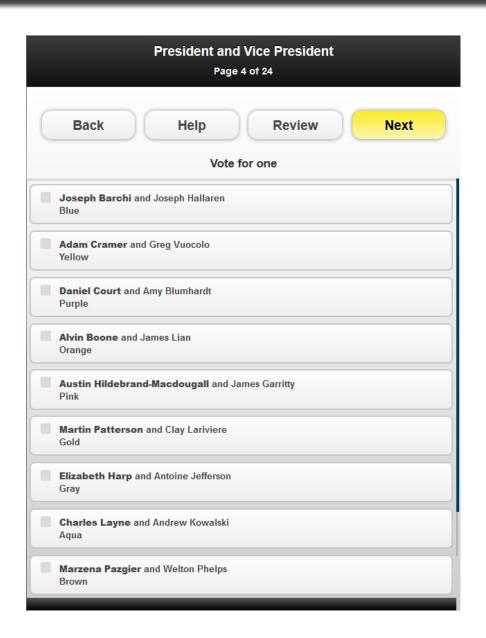
People with disabilities may not be able to participate independently in the electoral process due to:

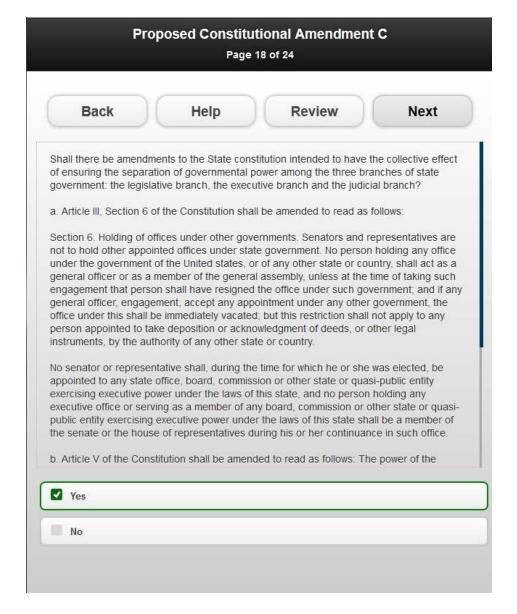
- Difficulty using existing voting systems
- Lack of accommodation of 'hidden disabilities'
- Usability issues with paper ballots and DREs
- Lack of scientific data to support selection of design features
- Complexity and expense of setting up and configuring accessible technologies

Can a low cost tablet be adapted to interface with the Military Heroes Voting Test Bed to research voting accessibility and usability?

Tablet Test Bed Interface Tablet Layout

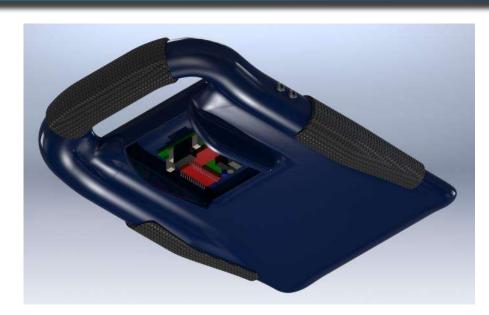






Tablet Test Bed Interface Rendering









filename -5

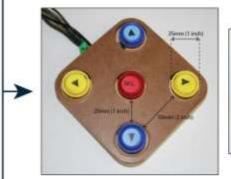
Tablet Test Bed Interface Rendering

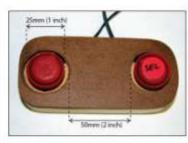




Ballot Design and Interface Research

- Previously tested a young adult population
- Currently evaluating older adults, adults with arthritis, and adults with other disabilities





5-button vs. 2-button



Collected eye-tracking, timing, and selection data, as well as system usability survey







Scroll

VS.

Column

VS.

Multi-page

Research



- Dyslexia Font Usability Study
 - To evaluate different dyslexia fonts that have been developed for the web: OpenDyslexia and Lexicon
 - Determine whether these dyslexia fonts assist people with dyslexia in the voting process.
 - Recruit 16 participants with dyslexia, and 16 age and gender matched control group.
 - Currently being executed. Anticipated completion June 30, 2013.

Helvetica Font Shelley Handy OpenDyslexic Font Shelley Handy Lexicon Font Shelley Handy



- Use of Plain Language (PL) in Spanish and Chinese
 - Replication of NIST PL study (NISTIR 7556) in both Spanish and Chinese languages
 - Investigate the following:
 - Do participants vote more accurately on PL or traditional ballot?
 - Do they perform better on traditional ballot if they voted the PL ballot first?
 - Is education a factor in performance on either ballots?

Hello World 孤帆远影碧空尽



Thank You!

Georgia



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Matt Hung GRA - Programmer



Sarah Farmer **GRA** - Statistics



Chandler Price SA - EyeTracker