April 1, 2013
NIST Accessible Voting Technology Research Workshop

Accessible Voting Technology Initiative

http://elections.itif.org

Whitney Quesenbery
Project Coordinator
We focus on the user experience, not just the technology.
Project Details

Phase 1: Defining the Problem

Phase 2: Designing a Solution

Phase 3: Looking to the Future
Criteria for Success

- **Usable**
  - Supporting all voters in marking their ballot accurately & efficiently

- **Accessible**
  - Enabling people with disabilities to participate independently and privately

- **Flexible**
  - Fits within election management practices from traditional polling places to vote centers and vote-by-mail

- **Secure and auditable**
  - Making it possible to recount and audit elections

- **Affordable and robust**
  - Within the means of even a small election district
Phase 1: Defining the problem

**Accessible Voting Technology: Analysis and Recommendations**
Mark Harniss and Deb Cook, University of Washington Center for Technology and Disability Studies

**AVT Workshops and Ethnographic Research**
Jon Sanford, Frances Harris, Karen Milchus, Claudia Rebola, Georgia Tech CATEA) and GTRI

**Assistive Technology in the Voting Process** – Greg McGrew, University of Colorado Assistive Technology Partners

**Defining the Barriers to Political Participation for People with Disabilities** – Thad Hall and Mike Alvarez, University of Utah

**Open Innovation Challenge: How might we design an accessible election experience for everyone** – OpenIDEO and 825 participants from around the world
Phase 2: Designing a Solution

Voters Guides and Training Materials

**Accessible Voter Information Guide and poll worker manuals** – Steven Jacobs, Apps for Android

**Voting Voice - Voter’s guide for people with aphasia** – Shaun Kane
University of Maryland, Baltimore County

**Vote Your Mind - Interactive voter guide for people with cognitive impairments** – Camille Crittendon, Gregg Niemeyer, Faraz Farzin, Dan Gillette, CITRIS

Election Administration

**Pilot programs for supervised voting by people in group living facilities** – Bonnie Glaser and Karin MacDonald, Election Administration Research Center

**Training material for poll workers based on ethnographic interviews** – Frances Harris, CATEA
Phase 2: Designing a Solution

Voting Technology

**Usability testing tablet voting system in long-term care facilities** – Greg McGrew, Assistive Technology Partners

**EZBallot design research** – Jon Sanford, CATEA and three intertwined graduate studies

**Anywhere Ballot design research** – Kathryn Summers, University of Baltimore, with Dana Chisnell, and Drew Davies

**Accessible hardware interface for an iPad-based voting system, development of a voting system testbed, and additional research** – Brad Fain, Carrie Bell, Andrew Baranak, Linda Harley, GTRI

**Engineering capstone projects to develop a joystick control and mounting bracket** – Sarah Swierenga, Graham Pierce, Stephen Blosser, Michigan State University and students in two engineering courses
“Design thinking is a human centered approach to innovation: [it] includes understanding people as inspiration, prototype building to think, using stories, having an inspired and inspiring culture.”

- Tim Brown, CEO, IDEO
Collaborative approaches to problem solving

Brainstorm many ideas

Build from inspiration to concept to refinement

Encourage inclusive, open collaboration
Focusing on people with personas

Summarize research

Connect human and technology needs

Show the journey through an election for people with disabilities

Personas: http://elections.itif.org/projects/design-workshops/
Invite new perspectives

3 of the winning concepts from the Open IDEO Innovation Challenge
http://www.openideo.com/open/voting/winning-concepts/
Invite new perspectives

Vote While You Shop: 'Pop-Up' Poll Sites Sweep Iowa
by SANDHYA DIRKS
October 24, 2012  5:44 PM

Listen to the Story
All Things Considered
3 min 25 sec

NPR News Story: http://www.npr.org/2012/10/24/163560324/vote-while-you-shop-pop-up-poll-sites-sweep-iowa
Reframe the question

What questions can we ask to suggest new directions?

How can the idea be used by more people with varied abilities?

What changes would new ideas require?
50 Ideas for Accessible Elections

5. A “Yelp” for polling places

Problem: Election officials do not always receive a lot of feedback on how well a polling place is run, especially in big districts with many polling places.

Idea: An online rating system could allow voters to give feedback to election officials on what is, or is not, working and how to improve the voting experience. Ratings for polling places could help voters identify the most accessible early voting centers and well-run polling places. This would also let the community recognize the expertise of election officials who operate the best polling places, who can then help improve neighboring locations.

8. An easier-to-grip smartcard

Problem: Some voting systems are activated with smooth, flat, plastic smartcards, but they can be hard for voters with arthritis or low dexterity to hold, and inserting them in the right direction is a challenge for blind voters.

Idea: Election officials could add a hole for a finger grip and cut an angle off of one corner or add a notch in the bottom for orientation to make these plastic cards more accessible.

15. Mobile-friendly election web sites

Problem: For people with disabilities, smartphones can be a lifeline, but election web sites do not always work well on a small mobile device screen. This can keep voters who rely on their phone as their main computer from finding election information.

Idea: Election officials should make sure that election web sites and applications, like online voter registration, work on mobile devices, either with a mobile app or a website designed so that it automatically adapts to the size of the screen. One way to help ensure that forms and web sites work on smartphones is to keep the layout simple.
“Design is not just what it looks like and feels like.

Design is how it works.”

- Steve Jobs
Thank you!

Email: accessiblevoting@gmail.com
Web: http://elections.itif.org

Election design workshops:
http://elections.itif.org/projects/design-workshops/

Working papers:
http://elections.itif.org/resources/working-papers/

50 Ideas for More Accessible Elections