Accessibility as innovation

creating a voting system for everyone

Testimony to the Presidential Commission on Election Administration
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Commissioners, thank you for the opportunity to talk to you today.

I'm Whitney Quesenbery from the Center for Civic Design. I am also the grants coordinator for the ITIF Accessible Voting Technology Initiative (AVTI), funded by the EAC. I'd like to share some ideas about how accessibility can be a source for innovation in elections.

This is not the first time we, as a nation, have taken up the issue of how to ensure that everyone – including voters with disabilities, older adults, limited English proficiency, and other special needs are able to vote with the same independence and privacy as any other voter.

Legislation from the ADA and the Voting Rights Act to HAVA have included requirements for accessible voting. Why then, despite evidence that we intend to make elections accessible, have we failed to meet the goal of an accessible system that is not only available but usable and used?

There has been progress. Since HAVA, we have one-system-per-polling-place, and data analysis shows increased participation. But too often we also hear reports of accessible systems that are not set up or are cumbersome for both voters and poll workers. There are exceptions, and I don't want to imply that there are no bright spots where election officials have met not just the letter, but the spirit of the requirements. But incremental change is not very satisfying.

One explanation is the different pace of change in other areas of both interactions with government and how technology is used for out personal and public lives.

We can think of this with a visualization I've borrowed from Stewart Brand. Think of the different aspects of civic life as lanes on a circular track and how fast each has to move to maintain a consistent pace. In the inner lane, we have laws and regulations, the slowest to change and

which usually have a slower cadence of change. The ADA was passed in 1990, Section 508 regulations adopted in 2001. HAVA was passed in 2002 and the VVSG went into effect in 2007.

In the next lane, voting systems, not only because we expect to use them for many years, but because they take time to design and develop. Then, elections procedures, voter habits and culture. This lane is more flexible, constantly evolving.

But in the outside lane, modern technology is practically racing along at "Internet speed." The pace at which new technologies are adopted has been particularly fast – and seems to be accelerating. It took 100 years to get from the introduction of the telephone to the Internet, but since the 1900s we've seen big, innovative, disruptive technology introduced almost every year. The screen reader JAWS was first released in 1989, email in 1993, Google search engine in 1997, Blackberry in 1999, the iPod in 2001, Facebook started in 2004, Twitter in 2006, the iPhone in 2007 and iPads in 2010.

For elections, the pace of technology change has brought with it rising expectations about how available, convenient, and accessible information and interactions with government will be.

What we need is new ways to think. Not isolated silos of work with security, design, and accessibility working in separate rooms, but collaborative innovation, with everyone at the same table so the resulting ideas are: *universal*, with a single voting system for everyone. *Flexible,* allowing for differences in voters, election procedure, state laws. And *robust,* able to keep up with the pace of change while still supporting elections we can have confidence in.

I have three suggestions for how we can do this.

1. Adopt best practices from industry.

As important as they are, elections are a small industry of relatively small companies and departments. The lack of resources makes it difficult (though not impossible) to conduct innovation research. The election cycle makes it hard to experiment. And experimentation—trying out new

ideas, conducting usability testing, and iterating the design—is key to successful innovation.

There are, however, products, processes and best practices that we can borrow from industry, carefully selecting those that add to our ability to make elections fully accessible.

I'm sure that everyone in this room has been asked, "If I can [fill in the blank] on my iPhone, why can't I vote with it?" Without getting bogged down in the long answer to that question, we can still learn something about why mobile devices are such an attractive idea.

When the iPhone was first introduced, it was described as a "slab of glass." TEITAC, the committee working to recommend updates to Section 508, had a meeting that week, and there was a lot of dismay about how this phone was setting accessibility back. The debate raised some of the same questions about whether accessibility and innovation were in conflict that we sometimes hear about accessibility and security in elections. Fast forward to today, and the iPhone and iPad are considered "best in class" for mobile device accessibility.

Let's look at what happened. In my reading, it was a mix of need to meet a legal mandate (in Section 508 and similar state laws), a corporate commitment to finding a solution, and an innovative approach. Apple changed the software, not the hardware, and embedded accessibility features deep in the operating system, where every application on the platform can use them.

The Cloud for All or Global Public Inclusive Infrastructure project has the same goal: instead of adding accessibility features to a product after it is designed, bake them in, so they are easily available.

2. Open the process for ideas and create ways to collaborate.

In 2012, the Accessible Voting Technology Initiative ran two innovation projects: an open, online challenge with OpenIDEO, and workshops held at Georgia Tech with election officials, voting system vendors, designers and people with disabilities. For industry designers, this sort of collaborative design studio is a common practice. Afterwards, we got positive comments that the structured work sessions were (for advocates)

an opportunity to “Get out of the echo chamber” and (for election officials) “A chance to work *together.*”

The OpenIDEO process was more experimental, as it posed the challenge of creating accessible elections to people with no experience in elections. The goal was to bubble up ideas and we could use.

As an example of how this worked, one concept that the OpenIDEO community pursued was pop-up polling places or “vote-mobiles” modeled on food trucks or mobile libraries. What they had no way of knowing was that election officials in Iowa were also thinking similarly, and put a pilot program in place as an extension of early voting and outreach to bring polling places to communities around the county.

What if we had a way to bring all that enthusiasm and creativity and brain power to not only explore early design concepts, but think about how to realize them in elections.

3. Design for the extremes.

Conventional wisdom suggests that we design for the center of the curve, and then expand to include a wider range of capabilities. If we reverse this thinking, we can include more people from the beginning, starting from “best in class.” This would match the ISO definition of accessibility as “usability for the widest range of capabilities.”

If we take this farther and start by designing for the extremes, we might find that these solutions can be useful for everyone.

For example, most voting systems use a mouse or hardware buttons for input, but a project at MSU is testing a joystick as an input device for a voting system. Joysticks work well for both people who have low dexterity control, and those who cannot use a lot of force. They match the familiar 5-button interface – with up, down, left, right, and select – and are familiar to many from games and industrial controls. Perhaps a suitably designed joystick could be a more universal way of marking choices on an electronic ballot marker.

Meeting cognitive needs is another good example. We know from many projects, including work at the Center for Civic Design, that election information and ballot questions are complex and baffling to many. Some

basic plain language would be helpful, but we can go farther and look at how to make this information accessible to people with low literacy, vets with traumatic brain injury, or people with aphasia, as three AVTI projects at CITRIS, UMBC and University of Baltimore are doing. Perhaps what we learn about engaging these “extreme” voting audiences will help us learn to engage all voters more actively, well before Election Day.

Finally, it’s easy to see how the needs of military and overseas voters for flexibility apply to others as well. In one usability session, we met a woman with advanced cancer. She liked to vote in person, but said she never knows whether any day will be a “good day” or not. Resigned to voting absentee, she went to her local elections web site, and discovered that she could vote early. She’s not military, not overseas, and might not show up in the Census as someone with a disability, but election procedures that solve problems for those audiences also worked for her.

In closing, innovation doesn’t have to be dramatically disruptive. We urge the Commission to consider an approach that combines best practice recommendations with ways to create opportunities for collaborative input from all. We can take good ideas and turn them into great elections.

Links

Accessible Voting Technology Initiative - http://elections.itif.org/

OpenIDEO Innovation Challenge - http://www.openideo.com/open/voting/brief.html