# VOX
# Research
# Report

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POLLWORKER EXPERIENCE
MAY 2015

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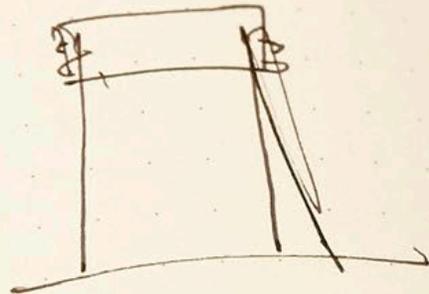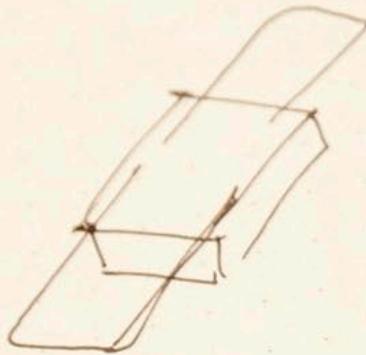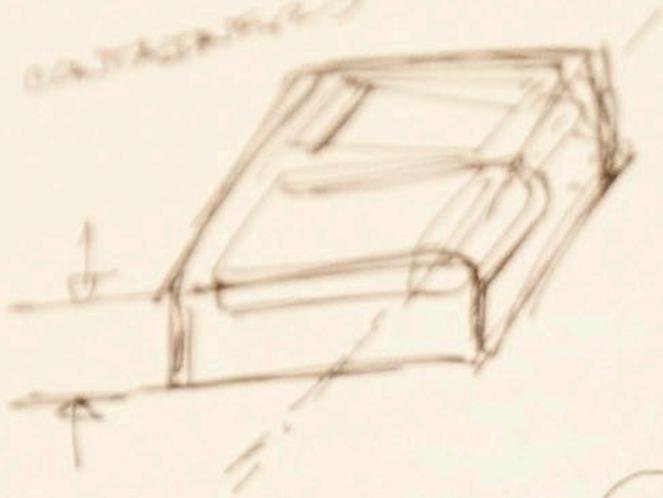
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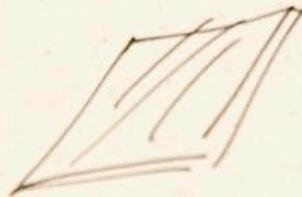
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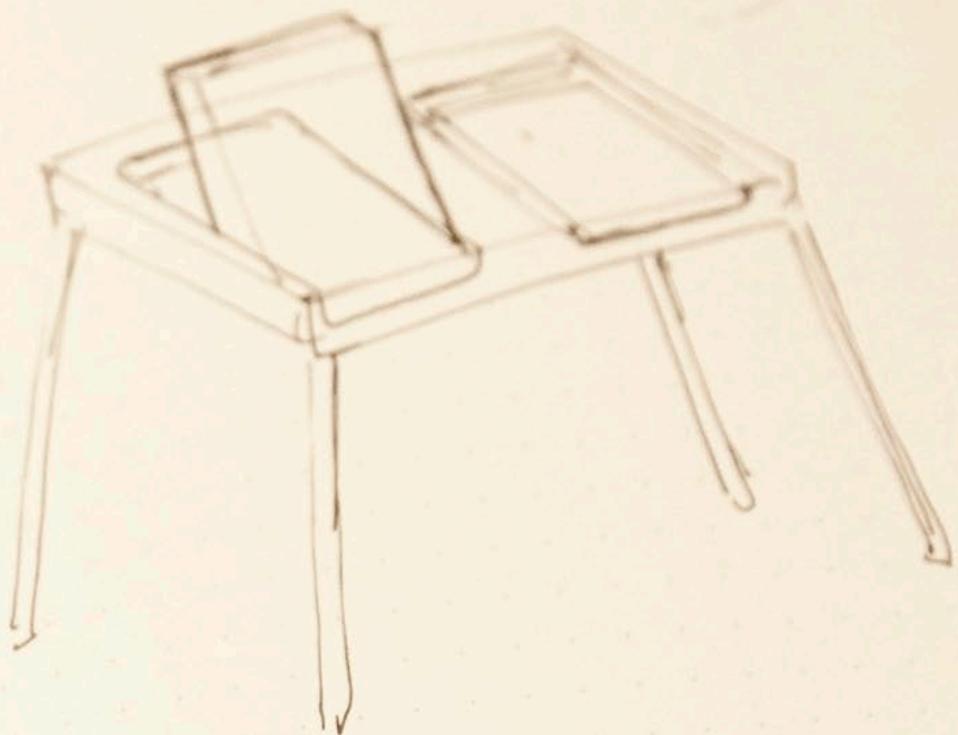
SUITCASE DESIRABLE

REDESIGN SUITCASE

# VOX RESEARCH REPORT
POLLWORKER EXPERIENCE
APRIL 29, 2015. V1.3. PROTOTYPE 5.1.4

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## Summary

This pollworker focus group provided the IDEO team with qualitative data to inform our iterative design of the polling place hardware/software experience. To date, the voting experience has been optimized for the voters. Data from this session will help the IDEO team to design a polling place experience that also works well for pollworkers.

We engaged seven diverse participants who discussed their roles as pollworkers, set up and took down two prototype systems, and provided feedback ont he next iteration of hardware design. Data analysis from the focus group led to the following insights:

- Hardware set-up should be as "easy as pie," inspiring confidence and delight.
- Lifting and positioning the hardware should be minimally taxing and provide workarounds like wheels, handles and other tools.
- "A place for everything and everything in its place." Keypad has a pocket, headphones have a hook, and cables stay tidy.
- Booth should protect the real and perceived privacy of the ballot.

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## Participants

A total of 7 pollworkers participated.  Participants were recruited using a non-representative sampling method called purposeful selection. Unlike representative sampling, which attempts to recreate the demographics of a particular community through techniques like random selection within a sampling set, purposeful selection intentionally targets people who represent groups of interest within a community. For this study we purposely selected participants representing four groups of interest within the pollworker community:

1. pollworkers with at least 20 years of experience,
2. pollworkers with a maximum of 5 of experience,
3. senior pollworkers who are at least 65 years old,
4. pollworkers from diverse racial/ethnic backgrounds.

Pollworkers were selected and recruited by the RR-CC office. In addition, Kenneth Bennett, Jeramy Gray, Monica Flores, Adrian Avelar, and Daniella Delea from VSAP core team within the RR-CC office were present for the focus group.

# Participants

Participants were diverse in terms of years of experience, race/ethnicity, and gender.

# Methods

This focus group engaged seven diverse pollworkers in discussion and activity around three key themes:

1.      pollworker roles and responsibilities
2.      booth set-up and take-down
3.      prototype development

The focus group was facilitated by IDEO researcher, Caricia Catalani, with assistance from four members of the IDEO hardware team: Jesse Fourt, John Lai, Jordan Lay, and Albert Leung. The team used a semi-structured discussion and activity guide.

Participants assembled, examined, and disassembled two hardware prototypes in small groups of 3-4. During this process, the design team observed the aspects of the process that were easy and intuitive as well as difficult and frustrating. The team then engaged pollworkers in discussion around what they preferred and why.

Pollworkers shared their ideas with the design team and each other, agreeing and disagreeing on different aspects of the design. This is a hallmark of a high quality focus group. Disagreements surface real differences in opinion among people and uncover deeper reasons for preferences, as participants press each other for convincing arguments.

Overall limitations and biases for the study include Hawthorne effect[1], social desirability bias[2], and sampling bias[3]. The impact of these limitations and biases may have been reduced by a sense of comfort and openness during the session, which was demonstrated by their willingness to contradict each other and debate hot topics.

1 People tend to act differently when they know that they are being watched.
2 People tend toward social acceptable behavior and statements in a new social environment, often avoiding giving negative critique.
3 This is not a random or strictly representative sample of individuals, so their experience and feedback might not be representative of others'.

# Prototypes

Two hardware prototypes (Version 5.1.4) were used to faciliate activity and discussion. These prototypes are detailed in the hardware 5.1.4 deliverable.

"You have 5 minutes to set-up each machine, then everything else. By the time I get done, I am sweating. Sometimes I think that I am getting too old for this."

# INSIGHTS & FINDINGS

**TOPIC:** Booth set-up
**BIG QUESTION:** How might we design a voting booth that's easy for pollworkers to set-up & take-down? What makes a particular design easy or hard?
**WHAT WE'VE LEARNED:** Setting up the voting booth should be as easy as pie—familiar, confidence inspiring, with moments of delight.
**DESIGN DECISION:** Continue refining the "speaker" prototype. Build on its familiarity, in terms of form, legs, & other physical features. Continue to add confidence-building feedback such as physical clicks when legs lock into place. Look for more opportunities to delight, such as the magnetic privacy shield.
**PRINCIPLES:** Easy for election workers & portable.

## Background

Los Angeles County, like countless other municipalities around the world, relies on a workforce of volunteer pollworkers who are paid a small stipend to manage the voting experience.  Even with a vote center model in place, pollworkers would likely continue to be important contributors and gatekeepers. Vote centers, however, would eliminate the need to transport all polling equipment in the personal vehicles of inspectors. This historical requirement limited the total mass of polling equipment to what could be fit into a compact trunk or part of a back seat.

Today and probably in the future, pollworkers arrive early to set-up polling places so the the polls open on time. They check-in and assist voters, provide assistance to voters of all kinds throughout the day, stay late to take-down polling places, and provide a level of citizen-monitored transparency to the ballot counting process. Most pollworkers are seniors who sometimes have dozens of years of experience managing polling places, but minimal experience with new technology. Of all the stakeholders in the elections process, pollworkers tend to be the most familiar with the details of polling and, as the IDEO team learned, the most committed to the historical ways of doing things. During other sessions, pollworker trainers and elections operators have explained that change is very challenging to manage among pollworkers, even when it's minorly evolutionary. Knowing that our designs will be a part of a revolutionary change, the IDEO team needed to understand what might make set-up and take-down easier for polloworkers.

## Findings

Easy set-up was critical for pollworkers. As one explained, "You have five minutes to set-up each machine, then everything else." The IDEO team designed two prototypes with two varying approaches to ease of set-up. Observations of the set-up activity revealed four features of the booth that enhanced the perceived and actual ease of set-up.

First, pollworkers perceived aspects of the prototypes that were familiar to be easy, even before they

started setting them up. For instance, a box looked easier than fabric held up by four tent poles because it "looked like a voting booth," as opposed to an "office desk" or a "ping pong net."

Second, physical feedback that let pollworkers know that they had set something up correctly enhanced the perception of ease. For instance, pollworkers preferred legs they could snap into place with an audible click (speaker prototype), as opposed to more subtle experiences like screwing in legs without the same confirming click (sawhorse prototype).

Third, ease was also enhanced by delightful and unexpected features. For example, when a privacy shield (speaker prototype) snapped into place with magnets, pollworkers were surprised and thrilled. They repeatedly showed each other how it worked, saying things like, "Did you see this!? It jumps right on there. Isn't that great!"

Fourth, set-up was easy when it involved fewer parts. The sawhorse prototype was in three separate containers with multiple parts when unassembled. Well before they began to set-up, pollworkers felt intimidated by the number of parts involved. When asked what they would change about this prototype, they unanimously agreed that it had too many parts. The speaker prototype, on the other hand, came in one container and had fewer parts to assemble. The legs were already attached to the frame and therefore not perceived as separate parts. All of the pollworkers preferred fewer parts and an all-in-one set-up that involved fewer steps to assemble.

Fifth, and finally, lifting and bending were challenging for many pollworkers. Although the more all-in-one speaker was preferred, many expressed anxiety about lifting such a heavy object. "Make it lighter" was the most common feedback received by the IDEO team.  Pollworkers also discussed options for making it easier to lift or move the polling booth including adding wheels and handles.  Similarly, pollworkers appreciated any aspect of design that minimized the time spent hunched over.

## Recommendations

We recommend continuing to enhance the ease of set-up through a few best practices:

1. Design for familiarity by mimicking the set-up concepts of common furniture, such as card tables and fold-up chairs.
2. Look for opportunities to add confidence-building physical feedback, such as legs that snap into place.
3. Seek out opportunities to delight with concepts like magnetic attachment.
4. Fuse separate parts together when possible, creating what will be perceived as one less part.
5. Make lifting easier by using lightweight materials, adding wheels to large cases, and including handles on any part of the device to be lifted.

Pollworkers considered the speaker prototype easier in many ways than the sawhorse. As such, refining and building on this design will be the next step.

"No matter what, voting can't stop."

# INSIGHTS & FINDINGS

**TOPIC:** Booth management
**BIG QUESTION:** How do we design a booth that's easy to care for during election day?
**LEARNED:** Pollworkers consider themselves the caretakers of all polling equipment. They see loose and untidy items as a threat to safety, efficiency, & effective voting.
**DESIGN DECISION:** Design an intuitive way to reset the booth after each use. Include tools for putting devices away & wrangling cords.
**PRINCIPLES:** Easy for election workers

## Background

Voters' access to democracy depends on the pollworkers' ability to keep polls open and running smoothly. After set-up, pollworkers are tasked with assisting voters and maintaining equipment throughout the day. Their role makes them uniquely aware of the types of damage equipment receives and the likelihood and implications of losing essential tools. During this test, the IDEO team wanted to gain understanding around how to make the voting booth easy to care for throughout election day. Pollworkers assessed the two prototypes in terms of what might make them easy or difficult to manage and discussed challenges that might come up during the day.

## Findings

As pollworkers examined the two prototype booths, they identified three design features that make booths easy to maintain during election day.

1. As one pollworker described it, "everything needs its place." Pollworkers liked the affordances of each prototype that allowed for a resting place or a home base for all essential items. They particularly noted that it was important for headphones to have a hook and the keypad to have a pocket or dock.

2. Pollworkers were concerned about cable management. "You never know, someone could trip on a cord and take the whole thing down," was a common concern. Pollworkers preferred easy wrangling mechanisms for all cables, and requested that any unavoidable dangling be kept to behind the booth. Pollworkers also expressed the need to manage electrical cords behind the voting booths. They were concerned that tripping might injure voters, cause damage to equipment, or interrupt voting sessions.

3. Although pollworkers only discussed the issue of printer jams after being prompted, they expressed concern about the jam-clearing process being too complicated. They're currently required to clear any ABB printer jams, however none of the pollworkers' printers had ever experienced a jam. Quite simply, they requested an easy process for addressing printer jams with clear how-to instructions.

## Recommendations

We recommend adopting aspects of both prototypes that simplify booth management.

1. Dedicated docking places for headphones and keypad
2. A system for managing peripheral and electrical cables
3. Hardware that allows for easy paper jam removal and reset with just-in-time UI guidance.

"It just feels too open."

# INSIGHTS & FINDINGS

**TOPIC:** Privacy
**BIG QUESTION:** What are usable, accessible, & private ways to manage the paper ballot?
**WHAT WE'VE LEARNED:** Booth should protect voters' real & perceived privacy.
**DESIGN RECOMMENDATION:** Move forward with the speaker design, further refining features that give voters real & perceived privacy.
**PRINCIPLES:** Private & Independent, easy for election workers

## Background

Pollworkers are responsible for upholding the rights of voters, including their right to a private vote. While voters are often sensitive to how their own booth experience protects or hinders their privacy, pollworkers are sensitive to how the set-up for polling station protects or hinders everyone's privacy. Given the vast range of spaces used as polling places, the IDEO team wanted to learn from pollworkers about how booths might be set-up to protect privacy.

## Findings

Pollworkers vigorously discussed privacy without any prompting from the IDEO team. During these discussions, they identified aspects of each prototype that might protect the real and perceived privacy of voters. One typical comment about the sawhorse prototype was that it "just felt too open." Although pollworkers admitted that the privacy shield might provide some protection, it just didn't feel like a private experience. Additionally, the dark, medium weight fabric used for the sawhorse prototype allowed for light to pass through it. Many pollworkers felt that even a little transparency posed a threat to privacy.

Pollworkers preferred the approach to privacy embodied in the speaker prototype. Specifically, they preferred the opaque privacy shield, and said the box around all four sides of the booth felt protective. Some even suggested that a shield behind the speaker booth would enhance its privacy, although no aspect of the voting experience would be visible from the back.

## Recommendations

We recommend moving forward with an iteration on speaker approach, enhancing the real and perceived privacy by extending the privacy shield, where feasible.

# AUTHORSHIP & CONTRIBUTORS

IDEO, 2015

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