

Usability and accessibility of electronic poll books

Preliminary draft

## **Usability testing for e-pollbooks**

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## A procedure for usability testing e-pollbooks

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On an Election Day, poll workers check in hundreds of voters. There will be easy voters who are easy to handle and others with a variety of special requirements for ID, signatures, updates, or who need to be redirected to the correct location. As the front line workers of the election department, their job is to ensure that every person is handled correctly and that the line keeps moving.

A well-designed e-pollbook can support poll workers better than one with a poor interface or awkward navigation. But what makes an e-pollbook most usable for poll workers, election staff, and voters? And what is the right way to evaluate the practical usability of an e-pollbook.

This document contains a procedure for conducting usability test that can be used by people designing or purchasing an e-pollbook, as a usability component for a certification or approval process, or to determine aspects of the product that need special attention in training poll workers.

An objective evaluation is critical to making smart decisions about how to design, purchase, or deploy this critical election technology.

This usability testing procedure puts an e-pollbook through its paces, allowing you to discover potential usability issues before an election. Seeing how people who might be poll workers interact with the e-pollbook allows you to look beyond the feature checklist and get a sense for how easy, or hard, it is for poll workers to use the e-pollbook to do their jobs on Election Day.

We hope that it can be part of improving elections technology for everyone.

## General approach

This usability test procedure can be used for several different purposes:

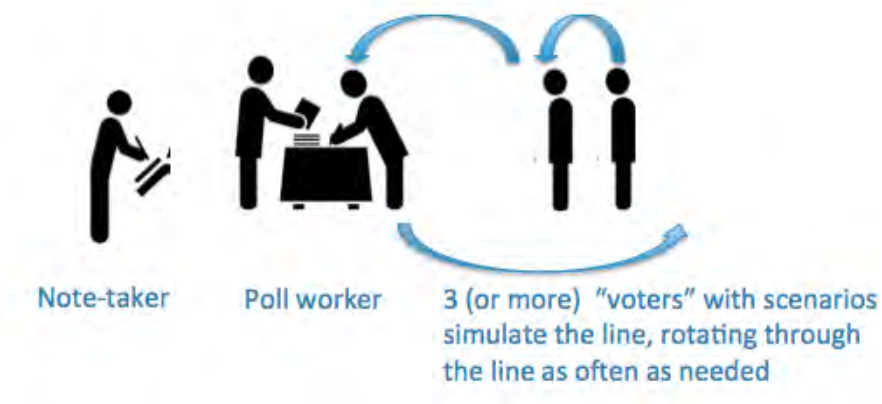
- Comparing different e-pollbooks and help make a purchase decision.
- Evaluating an e-pollbook being developed or customized in a jurisdiction, helping to improve the system's overall design
- Identifying tasks or procedures that need emphasis during poll worker training or voter education
- Testing a system for state certification or approval.

A good usability test is has a series of activities that is both representative of the way the system is used *and* that forces participants to try both common and uncommon tasks.

Although most e-pollbooks share the same basic functionality, there are many small differences in how poll workers, voters, and election staff interact with the system. For example, e-pollbooks that support tasks like scanning IDs or collecting signatures can make the process of finding and checking in voters more accurate and efficient. Each e-pollbook may also handle difficult situations in a different way, such as the voter being in the wrong polling place. All of these differences can have a major effect on a poll worker's efficiency, accuracy, and satisfaction during the high-stress conditions of a busy Election Day.

In this protocol, e-pollbook testing is run like a mock election, except that you are focusing on the poll worker experience, rather than voters.

- At the start of the session, the poll worker is given a brief introduction of the e-pollbook, similar to the training they might receive. An election manual or checklist is also available for them to use during the session.
- The testing room is arranged to mimic the way a polling place is set up, with a registration table where the "poll worker" handles a series of "voters" arriving to vote. Each of the "voters" is given a scenario that triggers one or more tasks or procedures using the e-pollbook.



- Each “voter” will be assigned one or more scenarios that he or she will “act out” for the participant “poll worker”. The scenarios cover a range of situations, both common and uncommon, such as multiple voters at the same address with the same first and last name, voter is in the system but at the wrong polling place, a voter who has already voted absentee or early, or other typical situations poll workers must handle.
- A brief interview at the end collects additional subjective data from the poll worker.

The testing team manages the session. A note-taker sits behind the “poll worker” to capture data on success or failures in each scenario along with information about what is easy and what is difficult. Another member of the team is designated to act a lead poll worker or election official to answer questions.

The procedures in this test plan describe the activities of a **single session – that is, the activities of a single participant acting as a poll worker** -- and the supporting structure for those activities.

The single session can be repeated, either sequentially or in parallel, until enough sessions are completed to have a good picture of how well the e-pollbook works, typically 6-12 sessions. Appendix B – Scheduling Variations discusses options for variations in how to schedule the sessions.

# Overview of what's needed for a session

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## An e-pollbook to test

- E-pollbook loaded with voter records.  
The number of records should be representative of the numbers typically loaded for an election

## Materials for the test session

- Scenarios for the “voters” to present, printed on cards  
Additional voter records may need to be entered manually in order to have voter records that correspond to particular scenarios.
- E-pollbook training material and poll worker manuals
- Consent forms, demographic questionnaires, and note-taking forms

## A place to run the session

- A space similar to one that might be used as a polling place.  
It can be a conference room or community space, as long as there is enough room for the registration table, poll worker, voters, and observers or note-takers. It is helpful for it to be reasonably quiet, so everyone can focus.
- An area for the pre-session training, possibly in the same room

## Testing team

- Test administrator: oversees the entire test.
- Trainer: conducts pre-session training on the e-pollbook being tested
- Note-taker: takes notes as the participant “poll worker” uses the e-pollbook
- “Voters”: workers who present the scenarios in a simulated check-in line

## Participant “poll worker”

- Person who acts as a poll worker to test the e-pollbook (See Appendix C – Recruiting Participants for the requirements for this role)

# Protocol Steps

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This section describes all of the steps needed to run this usability test protocol.

## **1. Preparation**

- 1.1. Locate a place to conduct the test
- 1.2. Determine the schedule for the session
- 1.3. Gather your testing team
- 1.4. Recruit your participant “poll workers”
- 1.5. Plan and print scenarios
- 1.6. Prepare and load voter records onto e-pollbook
- 1.7. Prepare and print training materials
- 1.8. Run a pilot session

## **2. Run the test**

- 2.1. Pre-test setup
- 2.2. (2 hours) Run the session
- 2.3. Complete all sessions

## **3. Analyze the data**

- 3.1. Collect and organize data
- 3.2. Interpret the results
- 3.3. Store the records

Appendices contain:

- A – Scenarios for the voters
- B – Suggestions for scheduling the sessions
- C --Recruiting criteria for the poll workers
- D – Demographics survey form
- E – Consent form
- F – Data collection sheet

## Step 1: Preparation

### Step 1.1: Locate a place to conduct the test

Find a room where you can simulate a typical setup of a polling place. You will need to consider the size of the room, the arrangement of tables, chairs, and lines, the placement of the e-pollbook, access to electrical outlets, and Internet access (if needed), just as you would for a polling place. A general purpose room or a conference room will usually give you enough space.

Ideally, the location will also include:

- Convenient parking or public transportation for participants arriving for the sessions
- A reception area where people who arrive early can be greeted and wait for their session to start

#### Tips for planning multiple sessions

If you are running multiple parallel sessions, a separate room where you can train several poll workers at a time can be useful.

### Step 1.2: Determine the schedule

Decide whether you will run one session at a time, or multiple parallel sessions. If you are running parallel sessions:

- How many sessions will you run at the same time? Remember that you need a note-taker for each session and enough “voters” to go around.
- Is your space large enough to run multiple participants in the same room (for example, at opposite ends of a large multi-purpose room), or will you have separate rooms for each session?
- Will you coordinate the session start times so you can train all of the participants for one time slot at once, or will you stagger them?

#### Tips for planning multiple sessions

See Appendix B – Scheduling Variations for session considerations.

### Step 1.3: Gather your team

Gather your testing team and provide everyone with details regarding the test times and location. In addition to the lead test administrator, the team includes:

- A trainer, who will teach the participant “poll worker” at the beginning of their session. During the session, the trainer may act as a “lead poll worker” providing assistance if the participant “poll worker” asks for help.
- One note-taker who will observe the participant “poll worker” for the entire session.

Identify or recruit people to act as “voters.” You will need at least 3 people in this role .

#### **Tips for planning multiple sessions**

One note-taker is needed for each simultaneous session.

More than 3 people are needed as “voters” if more than one session is running simultaneously.

See Appendix B – Scheduling Variations for different ways to organize your “voters” most efficiently.

#### **Step 1.4: Recruit your participant “poll workers”**

Recruit participants as poll workers. Decide how much you will pay them for their help.

Prepare information sheets (or messages) for them with directions, parking or transit instructions, location of the test room, name and phone number of someone to call if they’re late or lost, and any other information they need. Send this to them when they agree to participate, and again the day before the test.

| See recruitment criteria in Appendix C –

#### **Step 1.5: Plan and print scenarios**

The goal of the scenarios is to exercise how the e-pollbook helps poll workers handle both common and uncommon situations and should also be consistent with situations that arise in your jurisdiction. For example, if you don’t scan drivers licenses then you can eliminate those scenarios.

- Review the list of scenarios in Appendix A - Scenarios
- Remove scenarios not relevant to your jurisdiction, adjust the remaining scenarios to meet your jurisdiction’s procedures, and add any additional scenarios as needed for your jurisdiction.
- Put the scenarios in order and number them for easy reference. Numbering the scenarios also makes it easy to keep the sequence consistent and helps the note-takers match their notes to the correct scenario. Order the scenarios as follows:



- Put 5-6 easy scenarios at the beginning of the stack
- Randomize the order of the remaining scenarios
- Print the scenarios in large (at least 14 pt sans serif) type on a card or small piece of paper.
- Print/prepare materials needed to support scenarios such as a scannable bar code to act as a “voter’s” driver’s license.
- Organize the scenarios for the “voters”
  - Split the scenarios into separate piles, one pile for each “voter”, keeping supporting material with the scenario it goes with.
  - Label the piles for easy distribution to the “voters”

Table: Assign scenarios among the “voters” so they rotate to simulate the line at the registration table. The (blue) highlighted scenarios represent the first, easy scenarios.

	“Voter” 1	“Voter” 2	“Voter” 3
Scenarios assigned to each the “voter”	1	2	3
	4	5	6
	7	8	9
	10	11	12
	13	14	15
	16	17	18
	19	20	21
	22	23	24

**Tips for running multiple sessions**

If you are testing more than one e-pollbook or running parallel sessions, you may need a more than one set of scenario cards to make sure that they are all covered in each session.

**Step 1.6: Prepare and load voter records onto e-pollbook**

Set up the e-pollbooks

- Load voter records onto the e-pollbook
- The number of records should be representative of the numbers typically loaded for an election
- Add any voter records needed to support the scenarios

**Tips for running multiple sessions**

If you are using the same e-pollbook (or networked e-pollbooks) in sequential sessions, you will need to plan a way to reset/reload the machine back to the same starting state between sessions, so that each participant “poll worker” starts from the same database.

### **Step 1.7: Prepare and print training materials**

Prepare training materials. Unless you are also testing your poll worker training, consider making the training minimal, to avoid over-preparing the participant for the session. Remember that poll workers are not usually trained immediately before running an election and may forget some details

- Typically, training materials will be similar to the level of detail in your typical training.
- Cover activities or functions the participant “poll worker” will be doing during the session.

Prepare any election manuals or cheat sheets to represent materials available to poll workers in the polling place during an actual election.

#### **Tips for running multiple sessions**

If you are running parallel sessions, be sure you have enough training materials, election manuals, or other materials for participant “poll workers” for all of the sessions

### **Step 1.8: Run a pilot session**

Once you have all the preparation done, run at least one pilot (practice) session. This is usually done the day before the test, so that there is time to fix any problems (or even run another pilot session).

Be sure to include setting up the room, loading, and resetting the e-pollbooks in the pilot.

## Step 2: Run the test

### Step 2.1: Pre-test setup

Test administrator and additional helpers:

- Set up the room.
- Double-check that all materials are ready
- Set up the e-pollbooks so that they are either
  - Ready to open the polls if that is part of the task for the participant “poll worker”, or
  - Setup with the polls open if not

### Step 2.2: (2 hours) Run the session

The table below shows a schedule for a single session with one e-pollbook, starting from when the first session begins.

The timing for the schedule is based on allowing a generous 2 minutes for each scenario, because some include making notes, updating voter records, and other interactions more complicated than checking in a registered voter with no problems.

For ease of reading, the session schedule uses a start time of 1pm.

<b>1:00 – 1:20 Training for participant poll worker (20 mins)</b>	
Trainer	Greets participant “poll worker”. Explains what the participant will do, collects demographic questionnaire and consent form. Familiarizes the participant “poll worker” with the e-pollbook using the prepared training materials and any additional reference material that will be available.
Note-taker	Observes training and takes notes (using data collection sheet - see Appendix F)
“Poll worker”	Attends training
<b>1:00 – 1:20 Prepare “voters” (20 mins)</b>	
Test Admin	Orients the “voters” in a separate area, so as not to interfere with the participant “poll worker” performing the morning-of uploads. <ul style="list-style-type: none"><li>• Explains the room setup and procedure</li><li>• Distribute scenarios to the “voters” and instructs them on how to present their scenarios to the poll worker</li><li>• Have each “voter” practice with the test administrator playing the role of the poll worker. Arrange the “voters” in a line and one by one walk to up to a coordinator and present/act one of their scenarios, and move to the back of the line.</li></ul>
“Voters”	Arrive and go through orientation
<b>1:20 – 1:30 Morning setup by participant “poll worker” (10 mins)</b>	
Note-	Records start time for this portion of session

taker	Takes notes on the data collection sheet (see Appendix F) Scores setup process Records the stop time for this portion of session
“Poll worker”	Performs morning-of setup on e-pollbook (if this is part of the task), including turning on the system, doing morning supplemental updates, opening the polls
<b>1:30–2:30 Polls open - “voters” are checked-in (60 mins)</b>	
Test Admin	Acts as “chief election judge” – answering questions, when prompted, from the participant “poll worker” Helps manage the traffic for “voters” as needed
Note-taker	Records start time for this portion of session Takes notes for each scenario on the data collection sheet (see Appendix F) Scores each scenario Records the stop time for this portion of session
“Poll worker”	Checks in the “voters” (May ask questions as needed of the “chief election judge”)
“Voters”	Says the number of their scenario as they approach the check-in point (to help the note-taker stay in sync with the scenarios). Presents/acts the scenario from the top of their pile. Rolls to the back of the line and prepares to present the next scenario in their pile
Trainer	Helps as needed and takes any general notes (trainer should not hover over the “registration table”).
<b>2:30 – 2:40 Closing the polls (10 mins)</b>	
Note-taker	Records start time for this portion of session Takes notes on the data collection sheet (see Appendix F) Scores closing process Records the stop time for this portion of session
“Poll worker”	Completes any “end of day” procedures to shut down the e-pollbook at the end of the day (if this is part of the task).
<b>2:40 – 2:50 Debrief with participant “poll worker” (10 mins)</b>	
Note-taker	Debriefs participant poll worker and completes final questionnaire
“Poll worker”	Answers debrief questions
<b>2:50 – 2:55 Thank participants and compensation (5 mins)</b>	
Trainer	Thanks and compensate the participant “poll worker” (if being compensated)
Test Admin	Thanks and compensate the “voters (if being compensated)
“Poll worker”, “Voters”	Depart

### **Step 2.3: Complete all sessions**

This basic 2-hour session should be repeated with 6-12 different participant “poll workers” to get data from a range of people.

- See Appendix B – Scheduling Variations for possible arrangements for running sequential and parallel sessions.
- See Appendix C – for the mix of demographics to target when recruiting participant poll workers.

## Step 3: Analyze the data

### Step 3.1: Collect and organize data

Enter data into the note-taking sheet provided with this test protocol. The essential data recorded for each session includes:

- The task success for each scenario, set up, and shut down, on a “stop light” rating scale:
  - Red for Failure: did not complete task, or did so incorrectly
  - Yellow for Problems: needed help had to try more than once to complete the task
  - Green for Success: completed task accurately, without help or correction
- Observations about the participant “poll worker’s” ease, or problems, in completing the scenario
- Whether the participant “poll worker” struggled to complete a task, or requested assistance

### Step 3.2: Interpret the results

The completion scores and the observation notes will give you insights into what activities are more versus less intuitive on the e-pollbook. Some considerations when evaluating the data on an e-pollbook from one manufacturer:

Identify the number and types of problems participant “poll workers” had completing the scenarios:

- Identify any scenarios in which most or all of the participants had problems or had to ask for help
- Identify any scenarios that all participants completed successfully
- For scenarios with mixed results:
  - How consistent are the types of problems participants had?
  - Is there something about the interaction or design that directs the poll worker “down the wrong path”?

Look at the distribution of problems among the participants

- How similar are the number of different problems each participant had?
- Are there differences in success scores for experienced/inexperienced/first-time participant “poll workers”?
- Did some scenarios take an extremely long time to complete?

Think about how the problems can be solved:

- Could changes in training help poll workers be more successful?

- Are there customizable prompts or instructions on the screen that can be improved?
- Is the problem in the interface design or interaction?

If you are testing e-pollbooks from multiple manufacturers:

- What differences do you see in the completion scores for common/uncommon scenarios between the e-pollbooks?
- What differences do you see in the completion scores for experienced/inexperienced/first-time participant poll workers between the e-pollbooks?
- If your poll workers participated twice, once on each e-pollbook, what is their subjective reaction to the e-pollbooks? Do they have a preference and why?

### **For discussion**

How should we “score” the results on each task, each task group, and the entire e-pollbook?  
What data visualizations can be helpful to:

- Show the distribution of success and errors across the task scenarios. Do some tasks cause more problems than others? What is the severity of these errors?
- Show the severity of problems by participant or demographics. Do some people have more problems than others? Is there anything consistent about this pattern?
- Group comments or observations by task

### **Step 3.3: Store the records**

All records pertaining to the test data should be stored safely and securely for future reference.

Decide how long the records should be kept.

The purpose is twofold: first to protect participant privacy, and second to allow any future questions about the test results to be resolved based on direct evidence.

## Appendix A - Scenarios

These scenarios cover different situations poll workers encounter as they check voters in at the polling place. They are designed to ensure that the testing includes many different variations in navigating the interface and in working to local procedures.

The list of of scenarios should be adjusted to reflect situations in your jurisdiction.

- Remove scenarios not relevant. For example, remove scenarios for Election Day registration if not allowed.
- Adjust remaining scenarios as needed, such as the types of identification that can be scanned.
- Add additional scenarios as needed to ensure that important, new, or problematic local procedures are included.

In the scenarios, we have suggested names for the “voters” that are gender-neutral, so that anyone can play the role of any scenario. These names and appropriate addresses can be added to the voter registration database for the testing. Or, records that already exist can be selected for the scenarios.

Nickname	Scenarios (for the “voters” to present)	e-pollbook setup Supporting materials needed
<b>Registered to vote; in right place; ID checking variations</b>		
1. Regular voter Has drivers license	You are: Jordan Dougherty <street address> <city> <state> <zip> You have your driver’s license with you	This voter, at that address, is a registered voter for this polling place, and has not voted.  Materials: “drivers license” or non-driver ID with scan code.
2. Regular voter Has other scannable ID	You are: Andrea Manciano <street address> <city> <state> <zip> You don’t have your DL with you. You have your XXX with you	This voter, at that address, is a registered voter for this polling place  Materials: other scannable ID such as a voter registration card, or other official ID accepted for identification.
3. Regular voter Has a voter card	You are: Ananda Basak <street address> <city> <state> <zip> You don’t have anything with a picture ID. You have your voter card with you.	This voter, at that address, is a registered voter for this polling place  Materials: “voter card” (no photo or scan code)



4. Regular voter No ID or voter card	You are: Dakota Hopkins <street address> <city> <state> <zip> You don't have any ID or a voter card with you, so just announce your name.	Database: This voter, at that address, is a registered voter for this polling place  Materials: None
<b>Similar/same names</b>		
5. Multiple duplicate last names	You are: Kim Miller <street address> <city> <state> <zip>	Voter is registered for this polling place The e-pollbook contains 5-10 voter records with the same last name in this polling place. One of the other voter records is Kam Miller. Materials: Do not use scanned ID
6. Multiple duplicate first and last names	You are: Jesse Smith <street address> <city> <state> <zip>	Voter is registered for this polling place The e-pollbook contains 5-10 voter records with the same first and last name in this polling place. Materials: Do not use scanned ID
7. Same name, same address	You are: Chris Brazil <street address> <city> <state> <zip> Add'l information: Your parent lives at the same address and has the same name.	Chris Brazil (DOB 1980) is registered to vote in this polling place. Chris Brazil (BOD 1953) is registered to vote in this polling place. Both Brazil's have the same address. Neither use Jr or Sr appended to their names. Materials: May use scanned ID
8. Same name, same address with Jr/Sr	You are: Sidney Davenport Jr. <street address> <city> <state> <zip> Add'l information: Your father (Sr.) lives at the same address and has the same name.	Sydney Davenport Jr (DOB 1990) is registered to vote in this polling place. Sydney Davenport Sr (DOB 1960) is registered to vote in this polling place. Both Davenport's have the same address. Materials: Do not use scanned ID
9. Hard name to spell	You are: Koris Okonkwo <street address> <city> <state> <zip>	Voter is registered for this polling place Materials: Do not use scanned ID
10. Name can be first or last name (but otherwise nothing unusual)	You are: Jesus Rodriquez <street address> <city> <state> <zip>	Voter is registered for this polling place Materials: Do not use scanned ID

11. ID required	You are: <first> <last> <street address> <city> <state> <zip>	Voter is registered for this polling place. Voter is flagged as being required to show ID. Materials: Any photo ID
12. Address required, ID doesn't match	You are: <first> <last> <street address> <city> <state> <zip>	Voter is registered for this polling place. Voter is flagged as being required to show ID with address that matches voter record.  Materials: ID with address that doesn't match voter record
13. Address required, ID matches	You are: <first> <last> <street address> <city> <state> <zip>	Voter is registered for this polling place. Voter is flagged as being required to show ID with address that matches voter record.  Materials: ID with address matching voter record
14. Voter marked as needing assistance	You are: <first> <last> <street address> <city> <state> <zip> Add'l information: You can't stand for long periods of time; you need to be able to sit while casting your vote.	Voter is registered for this polling place. Voter is flagged as needing assistance
15. Voter requests assistance	You are: <first> <last> <street address> <city> <state> <zip> Add'l information: Request assistance marking your ballot.	
<b>Registered but in wrong place</b>		
16. Wrong table/precinct at polling place	You are: <first> <last> <street address> <city> <state> <zip>	Voter is registered for this polling place but not for this precinct
17. Wrong polling place	You are: <first> <last> <street address> <city> <state> <zip>	Voter is registered but not in this polling place
<b>Already voted</b>		
18. Voted earlier today	You are: <first> <last> <street address> <city> <state> <zip>	Any of the "regular voters" can cycle through the line a second time to trigger this scenarios

19. Already voted by early/mail	You are: <first> <last> <street address> <city> <state> <zip>	Voter is registered and marked as having already voted in this election.
<b>Not in database at all</b>		
20. Registered to vote by mail at the last minute	You are: <first> <last> <street address> <city> <state> <zip> You never voted before. You mailed in your voter registration info 3 days ago.	Voter not in the database. Address provided by voter is within the precinct/township
21. Claims to be registered, address is within precinct	You are: <first> <last> <street address> <city> <state> <zip> You are sure you voted last year at this location.	Voter doesn't show up in the database. Address provided by voter is within the precinct/township
22. Claims to be registered, address is outside of precinct	You are: <first> <last> <street address> <city> <state> <zip> You are sure you voted last year at this location.	Voter doesn't show up in the database. Address provided by voter is not in the county
<b>Updates</b>		
23. Update name	You are: Rayan Rivero <street address> <city> <state> <zip> You legally changed your name to "Paz" last month and want to get it updated here too.	Voter is registered for this polling place
24. Update address	You are: <first> <last> <street address> <city> <state> <zip> You recently moved from the other side of town. You have the proper ID showing your address is within the precinct.	Voter is registered to vote but not in this precinct.
25. Register new voter	You are: Micah Hamilton <street address> <city> <state> <zip> You moved from another state recently and you want to vote here since this is where you live now. You have the proper ID showing your address is within the precinct.	Voter is not in the database. Voter meets the requirements showing residency and vote eligibility for voting in this precinct

## Appendix B – Scheduling Variations

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This test plan describes a single 2-hour session, with one participant poll worker with one e-pollbook. A full usability test, however, should include 6-12 sessions for each e-pollbook being tested. This allows you to see a variety of people interacting with each e-pollbook.

There are many variations in how you schedule the sessions:

- Run one session at a time, over multiple days. This requires the smallest number of people to support the testing, but also means that you need staff and the space for more time
- Run multiple sessions at the same time, in a single or multiple days. This reduces the time it takes to run the sessions, but requires more test staff and “voters”

In addition, if you are testing more than one system, you can choose to allow a single participant to test just one e-pollbook or to be part of more than one session. Additional sessions should be scheduled for different days to avoid “test fatigue.”

- If each participant only works with one e-pollbook, you will be comparing the overall results across all participants. This is called a “between-participant comparison.”
- If participants test more than one e-pollbook, you can compare their success with and reactions to the different systems they test. This is called a “within-participant comparison.”

Given the relatively long time needed for each session, we suggest that each participant only works with one system and you use “between-participant comparison to analyze the results.

There are many possible ways to organize the schedule – a few are shown below for 8 sessions.

### Testing a single e-pollbook, one session at a time

All sessions are run in the same room, one after another. There is a short break between sessions to allow time for the staff to have a break and to reset the voter registration database.

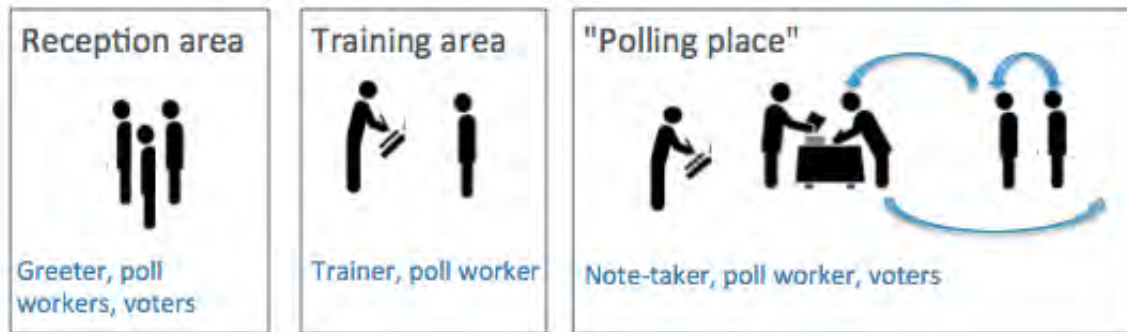
To include more test sessions, this schedule is extended over more days.

Session Time	Day 1	Day 2
8 – 10am	Session 1	Session 5
10:30 – 12:30pm	Session 2	Session 6
1:30 – 3:30pm	Session 3	Session 7

Session Time	Day 1	Day 2
4 – 6pm	Session 4	Session 8

## Testing a single e-pollbook, two or more sessions at a time

There are two or more stations (either separate rooms, or different areas in a larger room) to run the sessions. The schedule is set up so that participants are scheduled for the same session times, so they can be trained together. There is a short break between sessions to allow time for the staff to have a break and to reset the voter registration database.



- There is one trainer and one test administrator
- Each station has an e-pollbook and note-taker
- "Voters" rotate between spaces, playing out each scenario once for each participant/poll worker

This arrangement can be extended by having more stations or adding days of testing.

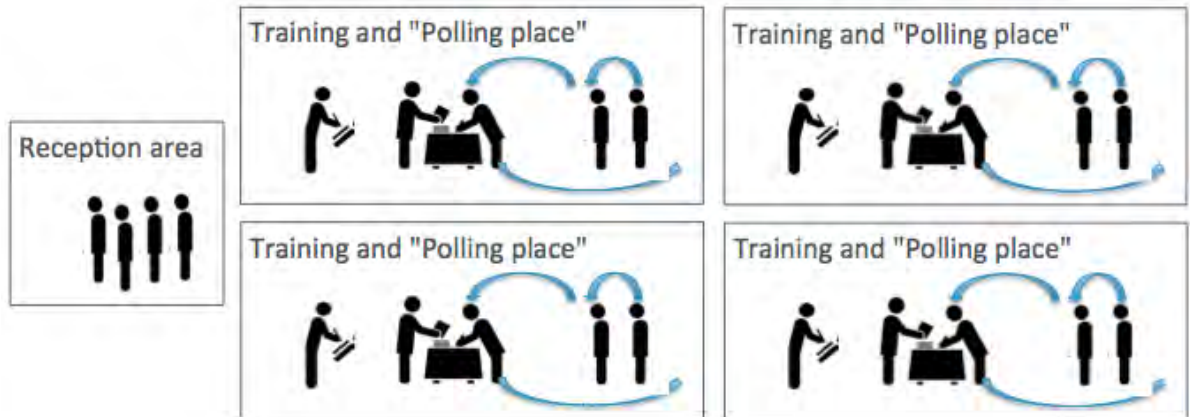
Session Time	Day 1/Station 1	Day 1/Station 2	Day 1/Station 3
8 – 10am	Session 1	Session 2	Session 3
10:30 – 12:30pm	Session 4	Session 5	Session 6
1:30 – 3:30pm	Session 7	Session 8	Session 9
4 – 6pm	Session 10	Session 11	Session 12

## Testing two or more different e-pollbooks

If you are testing more than one type of e-pollbook, you also have several options:

- Repeat the single session schedule, until you have run the same number of sessions for each e-pollbook.
- Repeat the multiple station schedule, testing one e-pollbook each day. The multiple station schedule takes more time but is less confusing for the test staff, as they can focus on each type of e-pollbook as they are tested.

- Use a staggered multiple station schedule, with one station for each e-pollbook, so they can be tested simultaneously. This reduces the time needed to complete all of the sessions, especially if you are comparing several e-pollbooks. As with the other multiple station schedules, each note-taker would stay at the same station all day, but staggering the sessions lets the same trainer cover all training sessions. The schedule below would be run on two days to reach 8 sessions per e-pollbook.



E-pollbook 1	E-pollbook 2	E-pollbook 3	E-pollbook 4
8-10am - Session 1	8:30 – 10:30 - Session 1	9am – 11am - Session 1	9am – 11am - Session 1
10:30-12:30 - Session 2	11am-1pm - Session 2	11:30 – 1:30 - Session 2	11:30 – 1:30 - Session 2
1:30-3:30 - Session 3	2-4pm Session 3	2:30-4:30 - Session 3	2:30-4:30 - Session 3
4-6pm - Session 4	4:30-6:30 - Session 4	5-7pm - Session 4	5-7pm - Session 4

- If you have more than one copy of each e-pollbook, you can use the multiple station schedule. In this arrangement, you can conduct the training for all of the participant/pollworkers in each session at the same time because they are all using the same e-pollbook. As with all of the other schedules, this one can be extended by having more stations or more days to complete all of the sessions.

Session Time	Station 1	Station 2	Station 3
E-pollbook 1 tested in the morning			
8 – 10am	EPB 1 - Session 1	EPB 1 - Session 2	EPB 1 - Session 3
10:30 – 12:30pm	EPB 1 - Session 4	EPB 1 - Session 5	EPB 1 - Session 6

<b>Session Time</b>	<b>Station 1</b>	<b>Station 2</b>	<b>Station 3</b>
E-pollbook 2 tested in the afternoon			
1:30 – 3:30pm	EPB 2 - Session 1	EPB 2 - Session 2	EPB 2 - Session 3
4 – 6pm	EPB 2 - Session 4	EPB 2 - Session 5	EPB 2 - Session 6

## Appendix C – Recruiting Participants

The participants who act as poll workers should be generally representative of the poll workers in your jurisdiction, but can include both people who have worked prior elections and those with no experience as a poll worker.

Demographic	Criteria*	Recruiting goals
Prior poll worker experience	<ul style="list-style-type: none"> <li>Experienced - (5 elections within 3 years)</li> <li>Some experience - (1-2 elections within the last 12 months)</li> <li>Inexperienced - (have not worked an election yet, though may have signed up or attended training)</li> </ul>	Recruit a mix of experience levels
Age	<ul style="list-style-type: none"> <li>18-40</li> <li>41+</li> </ul>	Recruit approximately an even split between these age groups.
Gender	<ul style="list-style-type: none"> <li>M</li> <li>F</li> </ul>	Recruit a mix matching your poll worker population
English proficiency	<ul style="list-style-type: none"> <li>Good</li> </ul>	Required, unless you have a bilingual testing team
Relationships	<ul style="list-style-type: none"> <li>Works in an elections or county clerk's office</li> <li>Works for a voting system vendor</li> <li>Is an elected official</li> </ul>	<b>Do not recruit!</b> (You do not want to include people with "insider knowledge" of elections in this usability test, though they might provide stakeholder input)

\* These criteria are based on the Poll Worker Usability Test in the VVSG

### For discussion

How can we screen for people likely to be a pollworker, if they have not done so in the past?

- Require that they be registered voters?
- Ask a question like "Would you consider working in an election in your community. You would be paid \$200 for the entire day, from 6am to 8pm"
- Ask if they volunteer in any other capacity in their community (for example, being a scout leader, fire or safety squad, community leader, club or church activity volunteer, or works in a community center, youth or senior center, or library).



## Appendix D – Participant demographic form

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Have all participants fill out this form at the beginning of the session, before training, so you have a record of the demographics for reporting.

\* This is based on the voter demographic form from the LEO Usability Test Kit

### Information about you

1. Are you registered to vote right now?     Yes             No             Don't know

2. Have you voted before?     Yes             No

When was the last election you voted in?    \_\_\_\_\_

3. Have you worked as a poll worker before     Yes             No

How many elections have you worked?     1-2             3-5             6 or more

4. What is your age? \_\_\_\_\_

5. What is your zip code? \_\_\_\_\_

6. Are you:     Female             Male

7. Do you have physical limitations, such as:

Yes     No    Blindness, deafness, or a severe vision or hearing impairment

Yes     No    A condition that substantially limits one or more physical activities, such as walking, climbing stairs, reaching, lifting, or carrying?

8. Do you have difficulty doing any of the following?

Yes     No    Learning, remembering, or concentrating?

Yes     No    Going outside the home alone to shop or visit a doctor's office?

Yes     No    Working at a job or business?

## Appendix E - Consent Form

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### Understanding Your Participation

We are learning about how e-pollbooks are used in an election. We will use the results of these sessions to improve these systems and election procedures.

If you agree to participate, you will:

- Learn how to use the e-pollbook
- Try using it in a mock election setting
- Answer a few questions about your experience

This will take approximately 2 hours.

Your participation is completely voluntary. If you choose to participate, you will be paid \$[amount] for your time.

- You may choose not to participate at all.
- You may decide not to complete some activities or answer certain questions.
- You may stop at any time.

Any information you share will be kept strictly confidential; your name will not be associated with the data we collect from your session.

If you have any questions, please contact:

*[ people and organization running the test ]*

If you agree to participate, please sign here:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## Appendix F - Data collection sheet for note-takers

To make it easier to take notes quickly and to collect and analyze the results from all of the sessions, use a structured data collection sheet. The following pages have a sample that can be adjusted as needed.

Participant #	Session Time	Notetaker
---------------	--------------	-----------

Starting the e-pollbook and opening the polls (if included in the test)	Success
Observations	<input type="checkbox"/> Completed easily <input type="checkbox"/> Minor difficulty <input type="checkbox"/> Struggled/had to ask for help <input type="checkbox"/> Made errors

Voter scenario # ____: _____	Success
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Observations	<input type="checkbox"/> Completed easily <input type="checkbox"/> Minor difficulty <input type="checkbox"/> Asked for help <input type="checkbox"/> Made errors <input type="checkbox"/> Gave up
--------------	---

Voter scenario # ____: _____	Success
------------------------------	---------

Observations	<input type="checkbox"/> Completed easily <input type="checkbox"/> Minor difficulty <input type="checkbox"/> Asked for help <input type="checkbox"/> Made errors <input type="checkbox"/> Gave up
--------------	---

Provide additional sheets with enough blocks to cover all voter scenarios.

Participant #	Session Time	Notetaker
---------------	--------------	-----------

Closing the polls and the e-pollbook (if included in the test)	Success
Observations	<input type="checkbox"/> Completed easily <input type="checkbox"/> Minor difficulty <input type="checkbox"/> Struggled/had to ask for help <input type="checkbox"/> Made errors

Debrief questions	Notes
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What is your overall impression of this e-pollbook based on your experience today?

What are two things you liked about this e-pollbook?

What are two things you disliked or found frustrating?

(For participants who have been poll workers) How does using this e-pollbook compare to using a paper pollbook (or, the pollbook you use now)?	
--	--

Would having an e-pollbook make you more or less likely to want to be a pollworker? Why?	
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For the next questions, do you strongly agree, agree, feel neutral, disagree or strongly disagree with the following statements:

I felt confident using this e-pollbook	1	2	3	4	5
Using this e-pollbook would make it easier to do my job as a poll worker.	1	2	3	4	5
Overall, I would find this e-pollbook useful in my job as a poll worker	1	2	3	4	5
Learning to operate this e-pollbook would be easy for me.	1	2	3	4	5
Overall, I would find this e-pollbook easy to use.	1	2	3	4	5

Are there any final comments you'd like to share with me?	
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