



NIST Voting Technology Series
NIST VTS 100-3pt2

Usability and Accessibility of Electronic Pollbooks

Part 2: A Usability Test Protocol

Whitney Quesenbery
Lynn Baumeister
Shanée Dawkins

This publication is available free of charge from:
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Preface

Research referenced in this report was conducted in 2017. The use of e-pollbooks presented throughout the document reflects the state of elections in 2017.

Abstract

This document is the second part of a series of documents on the usability of electronic pollbooks. It contains a procedure for how e-pollbooks might be evaluated, including a preliminary protocol for running a usability test. It 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. This usability testing procedure puts an e-pollbook through its paces, allowing discovery of potential usability issues before an election. Seeing how people who might be poll workers interact with the e-pollbook goes beyond the feature checklist and provides a sense for how easy, or hard, it is for poll workers to use the e-pollbook to do their jobs on Election Day.

Research referenced in this report was conducted in 2017. The use of e-pollbooks presented throughout the document reflects the state of elections in 2017. In the time since this research was performed, e-pollbooks have made progress addressing usability and accessibility issues. Additionally, as part of its ongoing Election Supporting Technology Evaluation Program (ESTEP) program, the Election Assistance Commission developed the Voluntary Electronic Poll Book Requirements (VEPBR) in collaboration with NIST. This publication is intended to provide a deep dive into how to evaluate the usability and accessibility of e-pollbooks in order to meet the relevant VEPBR user-centered design process and usability testing requirements as well as any state certifications pertaining to usability and accessibility.

Keywords

E-pollbooks; elections; electronic pollbooks; human factors; usability; voting

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Introduction

On an Election Day, poll workers check in hundreds of voters. There are 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 frontline workers of the election department, the job of the poll worker 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 help answer those questions. It 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.

Research referenced in this report was conducted in 2017. The use of e-pollbooks presented throughout the document reflects the state of elections in 2017. In the time since this research was performed, e-pollbooks have made progress addressing usability and accessibility issues. Additionally, as part of its ongoing Election Supporting Technology Evaluation Program (ESTEP) program, in 2023, the Election Assistance Commission (EAC) completed its first voluntary e-poll book pilot to determine if federal certification is a viable solution for the future of e-pollbook usage during elections in the United States¹. As part of the ESTEP e-pollbooks pilot, the Voluntary Electronic Poll Book Requirements (VEPBR) were developed in collaboration with NIST and include reporting of the user-centered design process and usability testing. This publication is intended to provide a deep dive into how to evaluate the usability and accessibility of e-pollbooks in order to meet these VEPBR requirements as well as any state certifications² pertaining to usability and accessibility.

¹ <https://www.eac.gov/voting-equipment/estep-electronic-poll-books>

² EAC clearinghouse of state certification requirements for electronic poll books <https://www.eac.gov/testing-and-certification/state-certification-requirements-electronic-poll-books>.

This report is Part 2 of the complete report on the usability and accessibility of e-pollbooks:

NIST VTS 100-3pt1: Usability and Accessibility of Electronic Pollbooks: Usability in the Polling Place

<https://doi.org/10.6028/NIST.VTS.100-3pt1>

NIST VTS 100-3pt2: Usability and Accessibility of Electronic Pollbooks: A Usability Test Protocol

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NIST VTS 100-3pt2sup1: Usability and Accessibility of Electronic Pollbooks: Checklists for Usability and Accessibility

<https://doi.org/10.6028/NIST.VTS.100-3pt2sup1>

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.

The usability test covers typical situations poll workers must handle, both common and uncommon, from simple registered voters to situations like multiple voters at the same address with the same first and last name, a voter in the system but at the wrong polling place, a voter who has already voted absentee or early, and so on.

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 as each product may handle similar tasks in different ways. All of these differences can have an effect on a poll worker's efficiency, accuracy, and satisfaction during the high-stress conditions of a busy Election Day.

The e-pollbook usability test is run like a mock election, except that you are focusing on the poll worker experience, rather than voters. The "poll workers" are the study participants in this usability test; the "voters" and other team members act in support of the usability test. Figure 1 shows a possible setup for the usability test, mimicking a polling place. People acting as voters approach the registration table where a poll worker checks them in. Behind them, someone from the testing staff takes notes.



Figure 1 lorem

The usability test session is in 3 parts:

1. **Preparation** – At the start of the session, the poll worker is given a brief introduction to 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.
2. **Run the test** – At the mock registration table, the poll worker handles a series of voters arriving to vote. The people playing the voters are assigned scenarios to act out for the poll worker.
3. **Aggregate the data** – A brief interview at the end collects the poll worker's reactions to using the e-pollbook.

The testing team consists of the test administrator and three roles who interact with the poll workers:

- A note-taker to capture data on success or failures in each scenario along with information about what is easy and what is difficult.
- A trainer designated to act as lead poll worker or election official to answer questions and who conducts the introductory training.
- People who act as voters, presenting the scenarios to the poll worker.

This usability test plan describes 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. This basic session is repeated, either sequentially or in parallel, until enough sessions are completed to have a good picture of how the e-pollbook works, typically 6-12 sessions.

Appendix G – Test Session Scheduling Variations discusses options for variations in how to schedule the sessions.

Overview of What's Needed for a Session

An e-pollbook to test

- E-pollbook loaded with voter records as typically loaded for an election, using real or realistic data.

Materials for the test sessions

- Scenarios for the voters to present, printed on cards, along with any props to simulate drivers' licenses or other things voters might bring to the polling place
- Materials for the poll workers to use including any job aids
- Consent forms, demographic questionnaires, and data collection sheets

A place to run the sessions

- A space similar to one that might be used as a polling place, e.g., a conference room or a community space. It needs to have enough room for everyone to comfortably conduct the test. It is helpful for it to be reasonably quiet, so everyone can focus.
- An area for the pre-session training, if not in the same room

Testing Team

- Test administrator: oversees the entire test.
- Trainer: conducts pre-session training and provides support when needed
- Note-taker: takes notes during the sessions
- Voters: workers who present the scenarios for the test

Poll worker(s)

- People who act as poll workers to test the e-pollbook

(See Appendix D – Recruitment Criteria for Participants for more information on who should fill this role.)

Steps in the Usability Test Protocol

This section describes the steps needed to run an e-pollbook usability test session.

1. **Preparation**
 - 1.1. Locate a place to conduct the test
 - 1.2. Determine the schedule
 - 1.3. Gather your 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. Brief the voters
 - 1.9. Run a pilot session
2. **Run the Test**
 - 2.1. Pre-flight setup
 - 2.2. Run the session (approximately 2 hours)
 - 2.3. Complete all sessions
3. **Analyze the Data**
 - 3.1. Collect and organize the data
 - 3.2. Interpret the results
 - 3.3. Store the records

Appendices

- A – Voter scenarios
- B – Templates for session materials
- C – Data collection sheet for note-takers
- D --Recruitment criteria for participants
- E – Participant demographics form
- F – Participant Consent form
- G – Test session scheduling variations

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. 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 work.

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, complete the consent forms, 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 G – Test Session Scheduling Variations for considerations when scheduling parallel sessions or sessions with multiple e-pollbooks.

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 poll workers at the beginning of their sessions. During the session, the trainer may act as a “lead poll worker” providing assistance if the poll workers ask for help.
- One note-taker for each simultaneous session. Each note-taker will observe a single poll worker for the entire session.

Identify or recruit people to act as voters. You will need at least three people in this role (and more if you are running more than one session at a time).

Tips for planning multiple sessions

See Appendix G – Test Session Scheduling Variations for different ways to organize your voter most efficiently.

Step 1.4: Recruit your participants

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

Prepare information 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.

Tips on finding participants and avoiding “no-shows”

See recruitment criteria in Appendix D – Recruitment Criteria for Participants. Call or email participants the day before the test, as a reminder.

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 in your jurisdiction, then you can eliminate those scenarios.

- Review the list of scenarios in Appendix A – Voter 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.
- Set the order for the scenarios. Number them so it is easy to keep the sequence consistent and help match notes to the correct scenario. See Appendix A – Voter Scenarios for how to order the scenarios
- Print the scenarios in large (at least 14 point) type on a card or small piece of paper.
- Print or gather supporting materials needed to support scenarios, for example, scannable bar code to act as a voter's driver's license.

Tips for managing the scenario materials

Organize the scenario materials so that the scenario card and supporting material stay together and keep it in order. Have a table off to the side where the voters can pick up the next scenario and save the ones they have already done.

Assign scenarios among the voters so they rotate to simulate the line at the registration table. For example:

	“Voter” 1	“Voter” 2	“Voter” 3
Scenarios	1	2	3
assigned to each	4	5	6
voter	7	8	9
	10	11	12

Tips for running multiple sessions

If you are testing more than one e-pollbook or running parallel sessions, you will need a set of scenarios for each parallel session, to keep them organized.

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

Set up the e-pollbooks. Plan how you will reset the e-pollbooks between sessions, so that each poll worker starts from the same database.

- 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 or complete any voter tasks (such as checking in a voter) needed to support the scenarios

Tips for running multiple sessions

If you are using the same piece e-pollbook (or networked e-pollbooks in sequential sessions, you will need a way to reset/reload the machine back to the same starting state between sessions.

Step 1.7: Prepare and print training materials

Prepare training materials. Keep 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.

- Training materials should include procedures for your jurisdiction, but don't include detailed information about how to use the e-pollbook.
- Cover activities or functions the poll worker will be doing during the session.

Tips for running multiple sessions

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

Step 1.8: Brief the voters

Run through the scenarios with the people acting as voters. Review the goal of each scenario with them, so they can respond to the poll worker appropriately. Have each voter practice with the test administrator playing the role of the poll worker.

- Explain the room setup and procedure
- Distribute scenarios to the voters and instruct them on how to present their scenarios to the poll worker
- Make sure they understand all of the materials, and can pronounce all names.
- Review how they will represent the age or other demographic details of the participant to make the scenario realistic for the poll workers.

Tips for preparing the voters

Practice with the voters to help them find a good balance between acting out the scenarios and overacting. They should appear distinct to the poll workers, but not be caricatures. Be sure that any characteristics they exhibit (such as leaning on the table or cupping their ear to hear better) support the scenario and don't distract.

Step 1.9: Run a pilot session

Once you have all the preparation done, run at least one pilot³ session. This is usually done the day before the test, so that there is time to fix any problems (or time to run another pilot session). Run the pilot session in the space where the sessions will take place.

- Include any setup needed for each session, including setting up the room and loading or resetting the e-pollbook.
- Run through all of the scenarios, in order, to make sure that all of the props and instructions work.
- Check team communication and plans for handling problems, including who will make decisions on issues that come up during the sessions.

Step 2: Run the test

Step 2.1: Pre-flight setup

Test administrator and additional helpers:

- Set up the room.
- Double-check that all materials are ready
- Set up the e-pollbooks
 - Ready to open the polls if that is part of the task
 - Open if poll workers are not required to complete the actions to open the polls as part of the test

³ A pilot session is a dress rehearsal of the test session (with the full team and multiple sessions, if planned). Its purpose is to check the design of the test session so that necessary changes can be made before data collection begins.

Step 2.2: Run the session (2 hours)

Table 1 shows a schedule for a single session with one e-pollbook, starting from when the first session begins.

The timing for this schedule is based on allowing a generous two 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 1:00 P.M.

Table 1. Sample usability test session schedule

Role	Activity
1:00 – 1:20 Training for poll worker (20 mins)	
Trainer	Greets poll worker(s). Explains what the participant will do, collects demographic questionnaire and consent form with the goals of the session and how it will work.
Note-taker	Observes training and takes notes on the data collection sheet (see Appendix C – Data collection sheet for note-takers)
Poll worker	Attends training
1:20 – 1:30 Familiarization with the space (10 mins)	
Trainer	Familiarizes the poll worker with the e-pollbook, and any materials at the registration table. Runs 3-4 training scenarios with voters Answers any questions about how procedures in the jurisdiction are followed using the e-pollbook.
Poll worker	(if included) Performs morning-of setup on e-pollbook, including turning on the system, doing morning supplemental updates, opening the polls Runs 3-4 simple training scenarios to familiarize themselves with the e-pollbook
Note-taker	Takes notes on the data collection sheet (see Appendix C – Data collection sheet for note-takers)
1:30–2:30 Open the polls - voters are checked-in (60 mins)	
Trainer	Acts as “chief election judge” – answering questions from the poll worker, takes any general notes, and 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 C – Data collection sheet for note-takers) 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”)

Role	Activity
"Voters"	Says the number of their scenario as they approach the check-in point (to help keep the note-taker stay in sync with the scenarios) Presents their scenario Rolls to the back of the line and prepares to present the next scenario in their pile
2:30 – 2:40 Closing the polls (10 mins)	
Note-taker	Records start time for this portion of session Takes notes on the data collection sheet (see Appendix C – Data collection sheet for note-takers) Scores setup process Records the stop time for this portion of session
Poll worker	(if included) Completes any "end of day" procedures to shut down the e-pollbook at the end of the day
2:40 – 2:50 Debrief with poll worker (10 mins)	
Note-taker	Debriefs poll worker and completes final questionnaire (see Appendix C – Data collection sheet for note-takers)
Poll worker	Answers debrief questions
2:50 – 2:55 Thank and compensation (5 mins)	
Trainer	Thanks and compensates the poll worker (if being compensated) Thanks and compensates 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 poll workers to get data from a range of people.

The appendixes have additional information needed for running the test sessions:

- Appendix A – Voter Scenarios
- Appendix B – Templates for Session Materials
- Appendix C – Data collection sheet for note-takers
- Appendix D – Recruitment Criteria for Participants
- Appendix E – Participant demographics form
- Appendix F – Participant Consent Form
- Appendix G – Test Session Scheduling Variations

Step 3: Analyze the data

Step 3.1: Collect and organize data

Enter data into the data collection sheet or spreadsheet. The essential data recorded for each session includes:

- Rating of the task success for each scenario, and if included, set up and shut down. Use a “stop light” rating scale:
 - Green for Success: completed task accurately, without help or correction
 - Yellow for Problems: had to hunt for something in the interface or repeated an action several times to get it right (such as entering a name more than once to search)
 - Red for Failure: needed help, did not complete task, or did so incorrectly
- Notes about the kinds of problems in each scenario, such as problems entering search or understanding an error message.
- Notes about questions on election procedure, such as asking whether an ID is acceptable.

Step 3.2: Interpret the results

The task success ratings 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 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 poll workers?

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?
- Is the problem in the device hardware (tablet, scanner, printer etc.)?

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 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?

Step 3.3: Store the records

All records pertaining to the test data should be stored safely. 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.

- Be sure no information that can identify a participant is stored with the notes.
- Store consent forms and receipts for honorariums with other financial records.
- Decide how long the records should be kept.

Appendix A – Voter 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 for local procedures.

Scenario Groups

There are seven groups of scenarios representing different types of tasks and potential usability problems.

A: Scannable ID

The common task of scanning an ID to find a voter.

- If your jurisdiction accepts many kinds of IDs, you can repeat scenario A2.
- If your jurisdiction doesn't scan IDs, you can remove these scenarios

B: Manual lookup, alternate lookup

Manual (non-scanning) methods of finding a voter. Like group A, they represent the simple task of finding a registered voter in the correct precinct.

- If your jurisdiction doesn't scan ID's, increase the number of scenarios in group B to fill gaps left by removing the group A scanning scenarios.

C: Voter differentiation / Similar names

Manual entry with complex search results, so the participant has to choose the voter from a list.

D: Status flags

Testing the clarity of indicators for voter status (e.g., ID required, voted absentee, etc.)

- Not all the scenarios in this collection will apply to all jurisdictions.
- Scenarios that don't apply can be removed or modified.

E: Changes to voter record, Election Day Registration, provisional voting

Recognizing and completing changes to the voter record (adding a voter, changing name or address, adding a note about the voter).

- If poll workers do not make changes to voter records, these can be removed;
- Or, they can be used as procedural scenarios to test whether the poll workers understand what to do when a voter requests an update

Group F: Wrong place

Identifying voters in the wrong polling place and next steps to take to direct the voter accurately.

Group G: Not in database

Accurately determining that the voter isn't in the database, looking up where voter should vote or other next steps.

Preparing the scenarios for your test

Adjust the scenarios for your jurisdiction

As you prepare the scenarios, adjust them to reflect situations in your jurisdiction and testing needs.

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

Identify the voter record to use for each scenario

Choose a voter record to use for each scenario that is in keeping with the focus of the scenario. If necessary, add voter records to the database to support the scenario.

- If your jurisdiction includes voters from particular countries or ethnicities, consider using voter records with those kinds of names.
- In a few scenarios, we have specific names because it was the most straightforward way to clarify the intent of scenario or show the specific instructions the voter should have on the scenario card. Those names and appropriate addresses can be added to the voter registration database for the testing. Or, records that already exist can be selected and the name in the scenario can be updated appropriately.

Fill in the placeholders on each scenario

- Placeholder text is within angle brackets, <>, and should be replaced according to the scenario.
- The voter will have the Scenario Card in hand when acting the scenario. Even if the voter's name, address, etc. is on a prop (such as a scannable ID), it should also be on the Scenario Card so the information is easily available for the voter.

Print Scenario Cards for the voters

- The Scenario Card provides the voter with the information a person would normally just know (e.g., their name, address, date of birth). In some scenarios it also provides some background information to help the voter respond appropriately to the information the participant may find in the database (e.g., an indication that a ballot was mailed to the voter). Sample Scenario Cards are shown in Figure 2.
- The voters do not need, and should not see, the information in the first two columns of the scenario tables below, i.e., Scenario name/Focus, Database prep/Materials prep (Table 2 through Table 8).

Figure 2 Examples of Scenario Cards for A1 and C3 (filled in and ready to print)



A1

Information to volunteer: Hi there, I'm Sally Frazier, but I'm probably under Elizabeth

What you have with you: Driver's license

Provide/confirm if asked:

Your name: Elizabeth Carol-Ann Frazier

Your address: 834 Smithfield Lane, Chevy Chase

Your DOB: 3/17/1991



C3

Information to volunteer: Ok, so my name is Marilyn Wong

What you have with you:

Provide/confirm if asked:

Your name: Marilyn K. Wong

Your address: 678 Bethesda Ave, Chevy Chase

Your DOB: 12/16/1982

Background: You live with your mom. She has the same name as you. The poll worker will need to differentiate you from her.



The Scenarios

Group A: Scannable ID

You will need multiple versions of the Group A scenarios, with different voter names.

Table 2. Scannable ID scenarios for Group A

Scenario	Preparation	Scenario Card Details
A1 Scannable driver's license Focus: Voter lookup via scanning an ID	Database prep: A voter in the right polling place that has not voted. Materials prep: Scannable "driver's license" with name and address that match the database.	Information to volunteer: Hi there, I'm <first> <last> What you have with you: Driver's license Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy>
A2 Other scannable ID Focus: Voter lookup via scanning an ID	Database prep: A voter in the right polling place that has not voted. Materials prep: Scannable "military ID" with name and address that match the database.	Information to volunteer: Hi there, I'm Andrea Mannicchio. That's "M A double N C". What you have with you: Military ID Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy>

Group B: Manual lookup

You will need multiple versions of the Group B scenarios, with different voter names.

If your precinct has voters from particular countries or backgrounds, make sure some of the scenarios use names from those areas.

Table 3. Manual lookup scenarios for Group B

Scenario	Preparation	Scenario Card Details
B1 Manual lookup	Database prep: A voter in the right polling place that has not voted.	Information to volunteer: <first> <last>, here's my voter card
Focus: Manual voter lookup	Materials prep: Voter card without scan code Notes: No scannable ID in order to force manual entry.	What you have with you: Voter card Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy>
B2 Hard name to spell	Database prep: Voter is registered for this polling place.	Information to volunteer: I go by [Nickname], easier to pronounce, but you will find me under [Real Name]
Focus: Manual voter lookup	Materials prep: None. Notes: No scannable ID in order to force manual entry.	What you have with you: Driver's license Information to volunteer: Been waiting a long time – let's get this done. Look up my address to find me. What you have with you: Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy>

Scenario	Preparation	Scenario Card Details
B3 Alternate lookup Focus: Alternate lookup with last & first name lookup doesn't produce results	Database prep (example): This voter is in the database as Melanie C Zuggmann (use a voter with a middle name that could be used as a last name). Anything else necessary to ensure an alternative lookup will be successful in the e-pollbook. Materials prep: None Notes: No scannable ID in order to force manual entry.	Information to volunteer: Melanie Creek. I registered last month. The form I got in the mail told me to come here to vote. What you have with you: Provide/confirm if asked: Your name: Melanie Creek Your address: <address> Your DOB: <mm/dd/yyyy> <i>Background: Your full name is Melanie Creek Zuggmann but you always go by Melanie Creek. Since you won't be in the database as Melanie Creek, the poll worker will need to look you up some other way. Be firm that you are sure you are in the right place.</i>

Group C: Voter Differentiation / Similar Names

Adjust these scenarios to fit with names in the database.

Table 4. Voter differentiation scenarios for Group C

Scenario	Preparation	Scenario Card Details
C1 Common last name Focus: Differentiating voters with the same last name.	Database prep: A voter in the right polling place that has not voted. A voter with a common first and last name, and a common nickname like Mike/Michael. 5-10 voter records with the same last name in this polling place. Materials prep: Voter registration card (without scan code) with the voter's name, address and precinct Notes: No scannable ID since it would by-pass any screens showing multiple voters with the same name	Information to volunteer: Mike Miller. I might be in there as Michael What you have with you: Voter registration card Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy>
C2 Common first and last name combination Focus: Differentiating voters with the same first and last name.	Database prep: A voter in the right polling place that has not voted. 5-10 voter records with the same first and last name in this polling place. Materials prep: None Notes: No scannable ID since it would by-pass any screens showing multiple voters with the same name	Information to volunteer: Are you ready for me? Look for <first> <last> What you have with you: Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy>

Scenario	Preparation	Scenario Card Details
C3 Same address, same name (mother/daughter pair)	<p>Database prep: A voter in the right polling place that has not voted.</p> <p>Two voters with the same name at the same address. Suggest mother / daughter pair since there is no tradition of using Sr/Jr for female names.</p> <p>Materials prep: None</p> <p>Notes: No scannable ID since it would by-pass any screens showing multiple voters with the same name</p>	<p>Information to volunteer: Ok so my name is <first> <last></p> <p>What you have with you:</p> <p>Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy></p> <p><i>Background: You live with your mom. She has the same name as you. The poll worker will need to differentiate you from her.</i></p>
C4 Jr/Sr differentiation	<p>Database prep: Two voters with the same name at the same address. One uses Sr.</p> <p>Materials prep: None</p> <p>Notes: No scannable ID since it would by-pass any screens showing multiple voters with the same name</p>	<p>Information to volunteer: Been waiting a long time – let's get this done. Look up <last> to find me.</p> <p>What you have with you:</p> <p>Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy></p> <p><i>Background: Your dad lives with you and has the same name as you but he uses Sr after his name. The poll worker will need to differentiate you from him.</i></p>

Group D: Voter status flags

Adjust these scenarios to cover all flags for your jurisdiction.

Table 5. Voter status scenarios for Group D

Scenario	Preparation	Scenario Card Details
D1 ID required at check-in due to registration by mail Focus: Visibility of status indicators	Database prep: Voter is registered for this polling place. Voter is flagged as being required to show ID because registered by mail. Materials prep: Scannable “driver’s license” with name and address that match the database.	Information to volunteer: <last> <first> What you have with you: Driver’s license Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy> <i>Background: You registered by mail so the poll worker may need to see ID before checking you in</i>
D2 Proof of address required at check-in, ID address doesn’t match Focus: Visibility of status indicators	Database prep: Voter is registered for this polling place. Voter is flagged as being required to show ID with address that matches voter record. Materials prep: ID with address that does not match voter record	Information to volunteer: <last> <first> What you have with you: Driver’s license Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy> <i>Background: You registered by mail, and this will be the first time you vote in this location.</i>

Scenario	Preparation	Scenario Card Details
D3 Proof of address required at check-in, ID address matches	<p>Database prep: Voter is registered for this polling place. Voter is flagged as being required to show ID with address that matches voter record.</p>	<p>Information to volunteer: <first> <last></p> <p>What you have with you: Driver's license</p> <p>Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy></p>
<p>Focus: Visibility of status indicators</p>	<p>Materials prep: Scannable "driver's license" with name and address that match the database.</p>	
D4 Voter flagged as needing assistance	<p>Database prep: Voter is registered for this polling place. Voter is flagged as needing assistance.</p>	<p>Information to volunteer: My name is <first> <last> and I would like to vote.</p> <p>What you have with you: Driver's license</p> <p>Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy></p>
<p>Focus: Visibility of status indicators</p>	<p>Materials prep: Scannable "driver's license" with name and address that match the database.</p>	
D5 Voter already voted	<p>Database prep: Voter is in database and marked as checked-in/voted (during setup the test administrator will check-in in this voter so the voter shows as having already voted today).</p>	<p>Information to volunteer: <last> <first></p> <p>What you have with you: Driver's license</p> <p>Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy></p>
<p>Focus: Visibility of "voted" or "checked-in" status</p>	<p>Materials prep: Scannable "driver's license" with name and address that match the database.</p>	<p><i>Background: You voted earlier today and are returned to the polling place to see what will happen. You are one of those people that doesn't trust "the system"</i></p>

Scenario	Preparation	Scenario Card Details
<p>D6 Voter's ballot was received</p> <p>Focus: visibility of early or mailed, or absentee ballot status</p>	<p>Database prep: Voter is in the database and record notes that their ballot was received (by the elections office)</p> <p>Materials prep: Scannable "driver's license" with name and address that match the database.</p>	<p>Information to volunteer: I'm <lastname> at <address></p> <p>What you have with you: Driver's license</p> <p>Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy></p> <p><i>Background: You sent in your ballot a couple of weeks ago but didn't hear anything back so came in to vote today.</i></p>
<p>D7 Voter was sent ballot</p> <p>Focus: Visibility of early or mailed, or absentee ballot status</p>	<p>Database prep: Voter is in database and marked as having been sent a ballot.</p> <p>Materials prep: Scannable "driver's license" with name and address that match the database.</p>	<p>Information to volunteer: <last> <first></p> <p>What you have with you: Driver's license</p> <p>Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy></p> <p><i>Background: You don't remember getting a ballot. If asked, say: "I was sent a ballot? I don't recall seeing that in the mail"</i></p>

Group E: Changes to voter record, Election Day Registration

Adjust these scenarios to match procedures in your jurisdiction. You can remove scenarios that are not allowed or leave them in as a test of whether poll workers can identify them and follow the correct procedure.

Table 6. Voter record change scenarios for Group E

Scenario	Preparation	Scenario Card Details
E1 Log assistance request Focus: Modifying the voter record	Database prep: Voter is registered for this polling place. Voter is flagged as needing assistance Materials prep: Scannable “driver’s license” with name and address that match the database.	Information to volunteer: I’m going to need help marking my ballot. My hand has been pretty shaky recently. What you have with you: Driver’s license Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy>
E2 Update name Focus: Modifying the voter record	Database prep: The voter record has the voter’s old name. Materials prep: <ul style="list-style-type: none"> • Scannable “driver’s license” with old name and address that match the database. • Official paperwork showing name change. 	Information to volunteer: Can I get my name updated as well as vote? My driver’s license has my old name but I have paperwork here showing my name change. What you have with you: <ul style="list-style-type: none"> • Driver’s license with old address at <old address> • Official paperwork showing name change to <new name> Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy>

Scenario	Preparation	Scenario Card Details
E3 Update address Focus: Modifying the voter record	Database prep: The address for the voter matches the driver's license (which has the old apartment number, not the new one). Materials prep: <ul style="list-style-type: none"> • Driver's license with old address (old apartment number) • Utility bill from last month with new address (new apartment number) 	Information to volunteer: I'd like to vote but I would also like to get my address updated so that my voter information gets to me next year at my new place. What you have with you: <ul style="list-style-type: none"> • Driver's license with old address at <old address>. • Recent utility bill with new address at <new address> Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy>
E4 Register voter Focus: Election Day Registration	Database prep: Voter is not in the database. Voter meets the requirements showing residency and eligibility for voting in this precinct Materials prep: <ul style="list-style-type: none"> • Driver's license with old address. • Recent utility bill with new address 	Information to volunteer: I don't think I'm in your system since I moved here recently but I would like to vote today. What you have with you: <ul style="list-style-type: none"> • Driver's license with old address at <old address> • Recent utility bill with your name and new address at <new address> Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy>

Group F: Wrong place

Adjust these scenarios to match procedures in your jurisdiction. You can remove scenarios that are not allowed or leave them in as a test of whether poll workers can identify them and follow the correct procedure.

Table 7. Polling place scenarios for Group F

Scenario	Preparation	Scenario Card Details
F1 Wrong polling place	Database prep: Voter is in the database but in a different precinct.	Information to volunteer: <last> <first>
Focus: Determining when a voter is in the wrong place, ease of directing voter to the correct place	Materials prep: Scannable “driver’s license” with name and address that match the database.	What you have with you: Driver’s license Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy>
F2 Wrong table/precinct at polling place	Database prep: Voter is in the database but in a different precinct.	Information to volunteer: <last> <first>
Focus: Determining when a voter is at the wrong table/precinct, ease of directing voter to the correct table/precinct	Materials prep: Scannable “driver’s license” with name and address that match the database.	What you have with you: Driver’s license Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy>

Group G: Voter not in database

You may need to add scenarios to cover additional rules for handling voters in your jurisdiction, for example, finding a voter in the county, or in the entire state.

Table 8. Voter database scenarios for Group G

Scenario	Preparation	Scenario Card Details
G1 Not in database, address is within precinct/township. Focus could include: Accurately determining that the voter isn't in the database, looking up where voter should vote, correct next steps	Database prep: Voter is not in the database. Materials prep: Scannable "driver's license" with name and address that is within the precinct	Information to volunteer: I'm visiting my friend and since she was coming over here to vote I came along to see if I could vote here as well. Otherwise I'm not sure I'll be able to make it back to my place in time. Name's Phillip Dutton What you have with you: Driver's license Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy>
G2 Not in database, address is outside of precinct/township. Focus could include: Accurately determining that the voter isn't in the database, looking up where voter should vote, correct next steps	Database prep: Voter is not in the database. Materials prep: Driver's license with address that is in state but not in this county.	Information to volunteer: Helping my mom today so I need to vote here rather than closer to home. What you have with you: Driver's license Provide/confirm if asked: Your name: <first> <middle> <last> Your address: <address> Your DOB: <mm/dd/yyyy>

Order of the scenarios

Set the order of the scenarios to provide the poll workers with a good mix of easy and difficult tasks. In a typical Election Day, most of the voters will be in the right place and will be ready to vote, so the number of uncommon scenarios makes the usability test different from a real election in that respect.

- Start with 4-5 common scenarios (such as A1, A2, B1) to let the poll worker, and the voters, get into a rhythm before moving into uncommon scenarios.
- Don't clump scenarios from the same category – distribute them across the session.
- Intersperse additional common scenarios among the uncommon scenarios

Table 9 shows a good order for the scenarios. Running 25-30 scenarios takes approximately an hour to an hour and a half to complete.

Table 9. Sample order of scenarios for a test session

Num.	Group	Scenario
1	A – SCAN ID	A1 Scannable Driver's License
2	A – SCAN ID	A2 Other scannable ID
3	A – SCAN ID	A1 Scannable Driver's License
4	B - SEARCH	B1 Manual lookup
5	D - FLAGS	D5 Voter already voted
6	C - NAMES	C1 Common last name
7	E - UPDATES	E3 Update address
8	G – NOT IN DATABASE	G1 Not in database, address is within precinct/township
9	A – SCAN ID	A1 Scannable Driver's License
10	D - FLAGS	D3 Proof of address required at check-in, ID addresses matches
11	C - NAMES	C3 Same address, same name (mother/daughter)
12	F – WRONG PLACE	F1 Wrong polling place
13	A – SCAN ID	A1 Scannable Driver's License
14	D - FLAGS	D4 Voter flagged as needing assistance
15	E - UPDATES	E2 Update name
16	G – NOT IN DATABASE	G2 Not in database, address is outside of precinct/township
17	D - FLAGS	D1: ID required at check-in due to registration by mail
18	B - SEARCH	B2 Hard name to spell
19	F – WRONG PLACE	F2 Wrong table/precinct at polling place
20	E - UPDATES	E4 Register voter
21	B - SEARCH	B3 Alternate lookup
22	C - NAMES	C4 Jr/Sr differentiation
23	D - FLAGS	D6 Voter's ballot was received
24	C - NAMES	C2 Common first and last name combination

Num.	Group	Scenario
25	D - FLAGS	D7 Voter was sent ballot
26	E - UPDATES	E1 Log assistance request
27	D - FLAGS	D2 Proof of address required at check-in, ID address doesn't match

Appendix B – Templates for Session Materials

This section contains templates for materials you will need as props for the scenarios.

There are several websites that will create barcodes and QR codes in a variety of formats. The e-pollbook company can tell you what formats they can read.

Voter Identification Materials

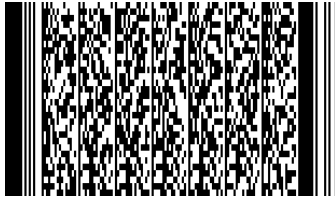
Identification Card Templates

You can use the templates in Table 10 to create identification cards so the voters have the correct props. Print them out, then cut along each row and fold in half to create a front and back.

- Some templates have two versions. One with the scan code on the back, the other with the scan code on the front. Choose the appropriate one for your jurisdiction.
- When filling in the name, address, and DOB fields – check to see if the scenario calls for a mismatch between the information on the identification card and the database or if it should be an exact match. Also consider variations (e.g., middle initial instead of middle name)
- Replace the sample barcodes or QR codes with versions that work for the e-pollbook being tested to find the correct voter. You may have to experiment prior to the pilot session to make sure that the code is reproduced accurately or is large enough to scan correctly.

Table 10. Card templates for various types of voter identification and barcode placements

✂

Front of card	Fold →	← Fold	Back of card
STATE OF XXXX DRIVER'S LICENSE License No. 123456789 Expires 4/15/20 Brandi Stephen Cochrane 190 Violet Drive Centerville, ST 13887 Sex: F Hair: Brown H: 5'5" DOB 12/17/1988			

✂



STATE OF XXXX
DRIVER'S LICENSE
License No. 123456789
Expires 4/15/20



Brandi Stephen Cochrane

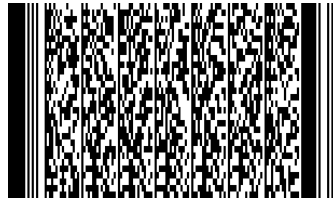
190 Violet Drive
Centerville, ST 13887
Sex: F Hair: Brown
H: 5'5" DOB 12/17/1988



**XXXX County
Health Services Department**
Administrator

Brandi Stephen Cochrane

Sex Height:
F 5'5"



Expires: mm/dd/yyyy



**XXXX County
Health Services Department**
Administrator

Brandi Stephen Cochrane

Sex Height:
F 5'5"



Expires: mm/dd/yyyy





United States Uniformed Services



Brandi Stephen Cochrane
IDENTIFICATION CARD



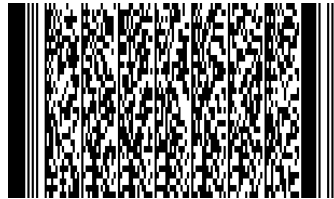
A 1 b 2 c 3 D 4 e 5



Local College

Brandi Stephen Cochrane
190 Violet Drive
Centerville 13887

DOB: 12/17/1988



Local College

Brandi Stephen Cochrane
190 Violet Drive
Centerville 13887

DOB: 12/17/1988



A 1 b 2 c 3 D 4 e 5





VOTER REGISTRATION CARD

Registration date: mm/dd/yyyy

Voter ID number: <voter id>

Precinct: <precinct>

Districts are based on your residential address:

Brandi Stephen Cochrane
190 Violet Drive
Centerville 13887



VOTER REGISTRATION CARD

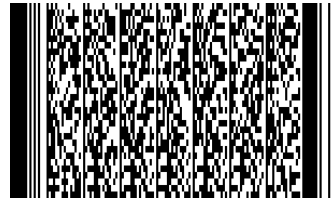
Registration date: mm/dd/yyyy

Voter ID number: <voter id>

Precinct: <precinct>

Districts are based on your residential address:

Brandi Stephen Cochrane
190 Violet Drive
Centerville 13887



Utility Bill Template

This prop is to support scenarios that call for the voter having a utility bill. Fill in the <voter>, and < address of voter> to support the scenario appropriately.

MY ENERGY – Utility Company

<voter>

<address of voter>

Account Activity

Date of Bill Nov 8, 2006

Electric Service - Account Summary

Invoice Number	0145443638	Residential General
Meter No.	0000W2349804	Air Quality Imp
Rate	R	Residential General
Current Reading	66568	Actual 11/07/2006
Previous Reading	66031	Actual 10/09/2006
Kilowatt-Hours Used	567	Demand Side Mgmt Cost
		Purch Cap Cost Adj
		Renew. Energy Std Adj
		Franchise Fee
		Sales Tax
		Subtotal

Gas Service - Account Summary

Invoice Number	0069615746	Residential
Meter No.	0000A1181128	Distribution
Rate	RG-T	Residential
Current Reading	3195	Actual 11/07/2006
Previous Reading	3166	Actual 10/09/2006
Measured Usage	29	Natural Gas - Nov
Therm Multiplier	0.8551	Natural Gas - Oct
Therms Used	25.00	Metering & Billing
		Franchise Fee
		Sales Tax
		Subtotal

Comparison Information

			Billing Period	Kwh Usage/Month	Therm Usage
Gas	\$25.87 per month	\$0.89 per day	This Year	567	25
Electric	\$50.75 per month	\$1.75 per day	Last Year	548	17

Customer Messages

This statement has been mailed for your information. No amount is due at this time.

Official Documentation of Name Change Template

This prop is to support any scenarios involving official names changes. Fill in the placeholder text within angle brackets, <>, to support the scenario appropriately.

CNR-3
(rev. 3-5-2007)

STATE OF XXX

<local county name> COUNTY PROBATE COURT

DOCKET NO: 123-78923

CERTIFICATE OF CHANGE OF NAME

I, Marjerie Landslow , Register of Probate for said County of < local county
name> , hereby certify that on <date> the name of <old name of voter> was officially
changed to <new name of voter> which shall hereafter be <her/his> legal name.



IN WITNESS WHEREOF, I have hereunto set
my hand and affixed the official seal of said
Court, on <date> .

Additional Props

Along with the voter identification materials, you might want to include a small collection of materials for the poll workers.

Blank paper

Why: To represent any form that is missing. Poll workers may try to mimic procedures they have learned in their own polling place.

A sign with the polling place location and precinct number

Why: It's hard to remember a made up place, so this can help poll workers remember where they are supposed to be. This information must match the database in the e-pollbook.

An “appointment letter” with the name and location of the polling place

Why: Use this during the training and orientation. It serves the same purpose as the signs—acting as a reminder of the session scenarios. It must match the physical signs and the database in the e-pollbook.

A map of the area

Why: Many polling places have maps to show the boundaries of the precinct or district. What's more important in the context of the usability test is that it show towns in the area that are outside of the precinct, so they can get a sense of how far a voter in the wrong polling place might have to go.

A job aid or poll worker newsletter

Why: Use this as a way to communicate any election administration rules, such as:

- Reminders of how to greet a voter
- Information to ask for, including confirming address or date of birth
- Reminders of voter ID rules

Avoid any instructions that tell the poll worker how to use the e-pollbook. In doing so, this becomes a test of the manual, not the device. If the test includes more than one e-pollbook, the same information should work for all of them.

Appendix C – 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. There is an example of a completed data collection sheet for a few scenarios at the end of this section.

- To help everyone focus on the same issues, the data collection sheet includes:
- The number and name of the task (to be cross-referenced during analysis or looked up on a list of scenarios),
- Whether the poll worker searched or scanned an ID to find the voter,
- A rating of the success of the scenario, with room for notes, and
- A space for notes on questions about election procedure.

The success rating scale uses a stop light scale of green, yellow, or red for the outcome.

- Green means that the scenario was completed accurately and easily, without help or any stumbles in using the e-pollbook.
- Yellow can be either minor or major problems.
 - Minor problems include easily correcting a misspelling of a name, simple mistakes like tapping in the wrong place, or looking briefly for the right function in the interface.
 - Major problems include actions repeated unsuccessfully several times, lengthy hunting in the interface, or having to correct a mistake like picking the wrong voter if this is not done immediately or easily.
- Red means that the poll worker
 - Needed help and would have given up without it,
 - Gives up without completing the scenario, or
 - Makes an error, like selecting the wrong voter or incorrectly handling the voter.

Brief notes about the kinds of problems the poll worker had in each scenario are helpful in reviewing the results of the test, especially if several people are taking notes.

Questions about election procedures include local election administration issues, such as checking whether an ID is valid or asking for the correct process for handling a situation in the scenario. You will have to decide whether they should have been able to figure this out from the interface, if it is something they should know from training, or if it is a good question.

It is often easier to take notes on a printed form, but it is also possible to type your notes.

Participant #	Session Time	Notetaker
Starting the e-pollbook and opening the polls (if included in the test)		
Observations	Task Success <input type="checkbox"/> Green: Success <input type="checkbox"/> Yellow: Success after problems or minor hint <input type="checkbox"/> Red: Failed, needed help or made errors	Procedure Notes <input type="checkbox"/> Asked for a clarification on election procedure (describe):
<hr/>		
Scenario # ____: _____ <input type="checkbox"/> Green: Success with no problems <input type="checkbox"/> Yellow: Success with <input type="checkbox"/> minor or <input type="checkbox"/> major problems <input type="checkbox"/> Red: Needed a hint to succeed: <input type="checkbox"/> Red: Made an error or gave up:	<input type="checkbox"/> Searched	<input type="checkbox"/> Scanned ID <input type="checkbox"/> Needed procedural clarification on election procedures:
<hr/>		
Scenario # ____: _____ <input type="checkbox"/> Green: Success with no problems <input type="checkbox"/> Yellow: Success with <input type="checkbox"/> minor or <input type="checkbox"/> major problems <input type="checkbox"/> Red: Needed a hint to succeed: <input type="checkbox"/> Red: Made an error or gave up:	<input type="checkbox"/> Searched	<input type="checkbox"/> Scanned ID <input type="checkbox"/> Needed procedural clarification on election procedures (describe):
<hr/>		

Make additional sheets with enough blocks to cover all scenarios.

Participant #	Session Time	Notetaker
Closing the polls and reporting (if included in the test) Observations		Task Success <input type="checkbox"/> Green: Success <input type="checkbox"/> Yellow: Success after problems or minor hint <input type="checkbox"/> Red: Failed, needed help or made errors
Procedure Notes <input type="checkbox"/> Asked for a clarification on election procedure (describe):		
Debrief questions to ask the poll worker(s)		Notes
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?		
How well did you feel the e-pollbook helped you handle problems or unusual voters?		
(For participants who have been poll workers) How does using this e-pollbook compare to the pollbook you use now?		
Would having an e-pollbook make you more or less likely to want to be a pollworker? Why?		
How would you feel about using this e-pollbook for an entire Election Day? Anything you haven't mentioned that you would change?		
Are there any final comments you'd like to share with me?		

Samples of a data collection sheet

Scenario # 3 : A1-Scannable Driver's License

- ☐ Green: Success with no problems
- ☒ Yellow: Success with ☒ minor or ☐ major problems: Picks up scanner backwards again. She pulls the trigger, and doesn't see anything happen on the screen. Finally turns it around and sees the red light.
- ☐ Red: Needed a hint to succeed:
- ☐ Red: Made an error or gave up:

☐ Searched ☒ Scanned ID

- ☐ Needed procedural clarification on election procedures:

Scenario # 5: D5-Already voted

- ☐ Green: Success with no problems
- ☐ Yellow: Success with ☐ minor or ☐ major problems
- ☒ Red: Needed a hint to succeed:
- ☒ Red: Made an error or gave up: On voter info screen, doesn't understand why it would let her print a new slip to get a ballot.

☒ Searched ☐ Scanned ID

- ☒ Needed procedural clarification on election procedures:
Asks "Why doesn't it say "Absentee" or "A" if they got an absentee ballot."
Does not seem sure of how to handle the voter correctly, even with a hint.
Sends voter away without offering provisional ballot.

Scenario # 6: B2-Hard Name

- ☐ Green: Success with no problems
- ☒ Yellow: Success with ☐ minor or ☒ major problems: Tries entering the name three times, but has a mis-spelling she doesn't notice. Gets very frustrated Finally tries just the first few letters.
- ☐ Red: Needed a hint to succeed:
- ☐ Red: Made an error or gave up:

☒ Searched ☐ Scanned ID

- ☐ Needed procedural clarification on election procedures:

Idea: How can we reinforce the "3-4" search procedure?

Scenario # 7: A2-Other Scan ID

- ☒ Green: Success with no problems. Sees bar code immediately and tries it even though not a DL
- ☐ Yellow: Success with ☐ minor or ☐ major problems:
- ☐ Red: Needed a hint to succeed:
- ☐ Red: Made an error or gave up:

☐ Searched ☒ Scanned ID

- ☐ Needed procedural clarification on election procedures:

Appendix D – Recruitment Criteria for 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. Table 11 shows criteria to consider when recruiting participants.

Table 11. Participant Criteria

Demographic	Criteria*	Recruiting goals
Prior poll worker experience	<ul style="list-style-type: none">Experienced - (5 elections within 3 years)Some experience - (1-2 elections within the last 12 months)Inexperienced - (have not worked an election yet, though may have signed up or attended training)	Recruit a mix of experience levels
Age	<ul style="list-style-type: none">18-4041+	Recruit approximately an even split between these age groups.
Gender	<ul style="list-style-type: none">MF	Recruit a mix matching your poll worker population
English proficiency	<ul style="list-style-type: none">Good	Required, unless you have a bilingual testing team
Relationships	<ul style="list-style-type: none">Works in an elections or county clerk's officeWorks for a voting system vendorIs an elected official	Do not recruit! (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 2.0, Principle 8.4⁴

Recruiting people who might be a poll worker, but have never done so

To screen people to include as brand new poll workers, ask them these questions. They must answer yes to all of them.

- Are you a registered voter?
- When was the last time you voted? [Must be within 3 years]
- Do you volunteer in your community, for example, on the fire or safety squad, or as a scouting, community, sports, or church activity leader, work in a youth or senior center, or something similar?
- Would you consider working in an election in your community? You would be paid for your time.

⁴ U.S. Election Assistance Commission (2021) Voluntary Voting System Guidelines Version. *Technical Guidelines Development Committee* (2.0):193. Available at https://www.eac.gov/assets/1/28/VVSG_1.1_VOL_1.508compliant.FINAL.pdf

Appendix E – Participant demographics form

Fill out a participant demographics form for each poll worker, asking them questions as you need to, to be sure you have recorded the information correctly.

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? ☐ Yes ☐ No

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

What is your role or title? _____

4. What is your age? _____

5. What is your zip code? _____

6. Are you: ☐ Female ☐ Male

7. Do you speak any languages besides English? _____

8. 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?

9. 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 F – Participant Consent Form

Copy and edit this form so you have enough for 1 per participant. Fill in placeholder text, in angle brackets, <>, appropriately.

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 G – Test Session Scheduling Variations

This usability test plan describes a single 2-hour session, with one poll worker using 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 can schedule the sessions:

- Run one test 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 test 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.

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 eight sessions.

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

All sessions are run in the same room, at one station, one after another (see Table 12). 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.

Table 12. Sample schedule for testing a single e-pollbook in sequential sessions

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
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) required to run the sessions. The schedule is set up so that poll workers 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 (see Table 13). The personnel requirements for this schedule are:

- One trainer and one test administrator
- Each station has an e-pollbook and note-taker
- Voters rotate between stations, playing out each scenario once for each poll worker

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

Table 13. Sample schedule for testing a single e-pollbook in parallel sessions

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 (see Figure 3 and Table 14). 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 in Table 14 would be run on two days to reach 8 sessions per e-pollbook.

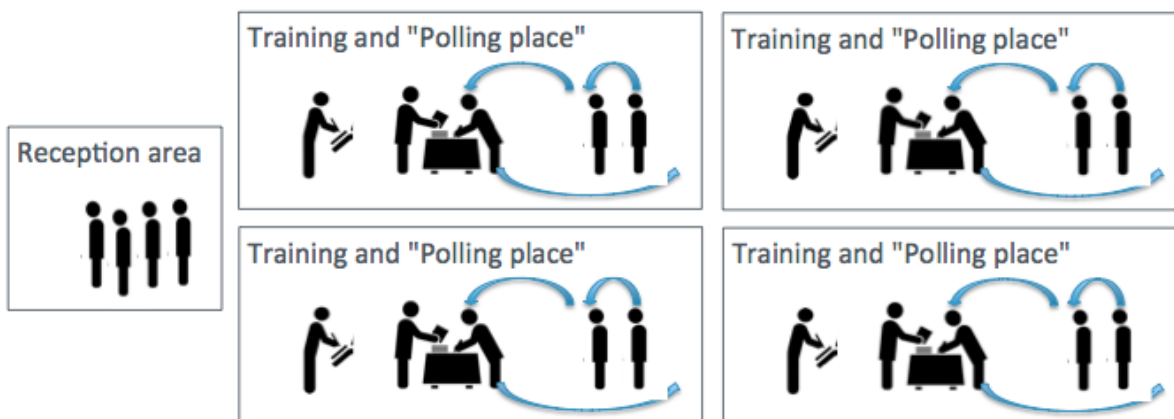


Figure 3. Testing setup for using multiple e-pollbooks

Table 14. Sample staggered schedule for testing a multiple e-pollbooks

E-pollbook 1	E-pollbook 2	E-pollbook 3	E-pollbook 4
8:00 – 10:00 AM Session 1	8:30 – 10:30 AM Session 1	9:00 – 11:00 AM Session 1	9:30 – 11:30 AM Session 1
10:30 AM – 12:30 PM Session 2	11:00 AM – 1:00 PM Session 2	11:30 AM – 1:30 PM Session 2	12:00 – 2:00 PM Session 2
1:30 – 3:30 PM Session 3	2:00 – 4:00 PM Session 3	2:30 – 4:30 PM Session 3	3:00 – 5:00 PM Session 3
4:00 – 6:00 PM Session 4	4:30 – 6:30 PM Session 4	5:00 – 7:00 PM Session 4	5:30 – 7:30 PM Session 4

- If you have more than one copy of each e-pollbook, you can use the multiple station schedule (see Table 15). In this arrangement, you can conduct the training for all of the poll workers 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.

Table 15. Sample multi-station schedule for testing a multiple e-pollbooks

Session Time	Station 1	Station 2	Station 3
E-pollbook 1 tested in the morning			
8:00 – 10:00 AM	EPB 1 - Session 1	EPB 1 - Session 2	EPB 1 - Session 3
10:30 AM – 12:30 PM	EPB 1 - Session 4	EPB 1 - Session 5	EPB 1 - Session 6
E-pollbook 2 tested in the afternoon			
1:30 – 3:30 PM	EPB 2 - Session 1	EPB 2 - Session 2	EPB 2 - Session 3
4:00 – 6:00 PM	EPB 2 - Session 4	EPB 2 - Session 5	EPB 2 - Session 6