E2EV User Model: User groups, attributes, goals, tasks, scenarios

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# Purpose of the user model

Describe, at a high level, the expected range of users of an end-to-end verifiable Internet voting system, in order to help project members discuss issues from these users' perspectives, and in the end, develop a better specification and feasibility report.

Provide the basis for user experience evaluation activities for the project, in order to design user research studies to test prototypes of the system. For example, the user model will help recruit representative users and provide a testing guide.

Be the foundation for portions of the report, in order to explain the characteristics of end-to-end verifiable Internet voting systems to election officers and other readers.

# Overview of the user model

**User group**: General categories of users of the system. Members of a group share many goals and tasks and are differentiated by several attributes.

**Attributes**: Characteristics of the group which show the wide range of members. Some attributes may be differentiators of goals and tasks, while other attributes will show those that share common goals and tasks despite their differences.

**Goals**: High-level reasons that drive behavior for this group of users: why people are using the E2EV system. These often have an emotional or societal aspect.

**Tasks**: Examples of specific things that users want or need to do with the system. These are the “mechanics” users need to perform to accomplish their goals.

| User Group | Attributes | Goals | Tasks |
| --- | --- | --- | --- |
| Voters | Geography (voting district & residence)  Remoteness (nearby, overseas, war zone)  Familiarity with voting (first-time, repeat)  Status (civilian, military)  Ability/assistive technology (screen reader, low vision)  Technical savviness (savvy, not savvy) | Perform civic duty  Support candidate/party | Understand process  Register to vote  Cast vote  Verify vote counted as cast  Report discrepancy with their vote |
| Election officials | Scope (state, local)  Job function (director, administrator, volunteer) | Smooth elections  Serve voters  Manageable challenges  Pass scrutiny | Communicate process  Register voters  Enable voting  Count votes  Verify election  Detect problems  Publish results |
| Public | Organization (individual, public, private) | Trust election results | Verify tally |
| Villains | Representation (individual, activist group, nation-state)  Technical resources (expertise, advanced technology) | Disrupt society  Change election results | Compromise servers  Distribute malware  Perform denial of service attacks |

## Attributes

Specific attributes should not focus on demographics information, but on how the attributes affect usage of the system. From [1], focus on these aspects of the attributes:

* Attitude: motivation, emotion, risk tolerance, trust, persistence, optimism, pessimism
* Aptitude: current knowledge, ability to make inferences, expertise
* Ability: physical and cognitive attributes

# Next steps for this document

~~1. Get general feedback on direction of this document. Update document.~~

2. Identify documents, project notes and other resources to mine for additional attributes, goals and tasks. Mine them, update document.

* Personas from A Web for Everyone
* The American Voting Experience (PECA)
* Project > Forums > Threat scenarios
* ….

3. Identify a small team to add deeper explanations of the groups, attributes, goals and tasks. Add the deeper content.

4. Engage the whole project team to explain the user model, get feedback on its usefulness, and advise other team members on how to incorporate it into their discussions and writings for their parts of the project.

# References

[1] Chisnell, Dana, 2012. Using personas to design better election web sites. <http://www.slideshare.net/danachisnell/using-voter-personas-to-understand-who-is-coming-to-your-election-department-web-site>