Outline

- Scope?
- Purpose?
- Research
- Q & A
What’s the scope?

• No secret ballot rights in UK

• Election administration varies amongst states and sometimes by local jurisdictions

• What should be the “default”: the most liberal or most conservative standards?
What’s the purpose?

• A record of system events? (deployed systems)
• A digital analog to paper ballot hand recount? (Cordero & Wagner, 2008)
• A post-election forensic tool? (security researchers)

- 14% undervote rate, still no conclusive explanations
- Compliance with VVSG event log standards is insufficient.
Researching a Solution

  - Investigated what user interaction events can be logged while preserving anonymity
  - Simulated common user interface problems
  - User study in progress
Relative Touch Coordinates

- Relative to upper left of selected button
- Button ID not recorded
  - Preserves voter anonymity
- Conforms to VVSG
- Assists in forensic auditing
Voter A

James Tiberius Kirk
Spock
USS Enterprise (NCC-1701)

Jean-Luc Picard
William Thomas Riker
USS Enterprise (NCC-1701-D)

Benjamin Lafayette Sisko
Kira Nerys
Deep Space Nine

Kathryn Janeway
Chakotay
USS Voyager

Voter B

James Tiberius Kirk
Spock
USS Enterprise (NCC-1701)

Jean-Luc Picard
William Thomas Riker
USS Enterprise (NCC-1701-D)

Benjamin Lafayette Sisko
Kira Nerys
Deep Space Nine

Kathryn Janeway
Chakotay
USS Voyager
Results

- Predicts direction and magnitude of miscalibration
- Potential uses:
  - Real-time diagnostic tool
  - Post-election investigation evidence
Conclusion

Further discussion and work is required to make a common data format an implementable reality
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Thank you!

Questions?