VVSG Cybersecurity Working Group

Update to the TGDC
February 13, 2017
An undetected error or fault in the voting system’s software is not capable of causing an undetectable change in election results.

The voting system produces records that provide the ability to check whether the election outcome is correct, and to the extent possible, identify the root cause of any irregularities.

Voting system records are resilient in the presence of intentional forms of tampering and accidental errors.

The voting system supports efficient audits.
Auditability serves multiple purposes: transparency, public confidence, continuous quality improvement, cyber security.

Evidence-based security: focus on measuring performance in field rather than testing in lab – save certification costs by trimming requirements.

Working group: Auditability is the number-one most important and effective protection for cybersecurity.

The voting system is auditable.
Auditability = An undetected error or fault in the voting system’s software is not capable of causing an undetectable change in election results.

- This effectively requires voter-verified paper records.

- Why not all-electronic? Because of the risk of a security breach that modifies all of the electronic records. In contrast, electronic breaches can’t retroactively change what’s already printed on paper.
Efficiency

*The voting system supports efficient audits.*

- Today, audits typically involve selecting some precincts or machines and inspecting all ballots in them.
- Ballot-level and small-batch audits enable more efficient audits, where winner can be confirmed by auditing (typically) a few hundred ballots (depending on how close the contest is).
- Example: stamp a unique ID number on ballot as it is scanned.
Should we require that the voting system must be able to support efficient audits?

There is debate within the working group. Some working group members argue that it should be required.

Options: (a) omit efficiency from VVSG; (b) require support for efficient audits; (c) requirements that apply only to systems that opt into them.
Will auditability (voter-verified paper records) be required in the next VVSG? This decision deeply impacts much of the future work of the working group.