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Testimony Against Provisional Certification of Sequoia WinEDS 4.0 Voting System

The Sequoia WinEDS 4.0 system is being presented to the Voting Systems Panel for a recommendation regarding provisional certification for use in Pierce County in the upcoming primary. The Secretary of State's office is considering provisional certification because the system has not yet been federally certified but is needed for the county to institute Ranked Choice Voting – as mandated by the voters of the county.

However, during testing, the State discovered two defects that adversely affect the accuracy of the vote count.

- 1) The Insight optical scanner falsely reports that there are no votes recorded on the memory pack (the cartridge where votes are stored) when there actually are votes recorded on it. This is exactly the same as looking in a ballot box and claiming it's empty when, in fact, there are voted ballots in it.
- 2) The WinEDS central tabulation system fails to recognize when there is a discrepancy between individual vote records and tabulated results stored on the memory pack, and it uses the individual vote records to calculate the results.

It is significant that the system as a whole reports an "empty ballot box" based on one set of records, but uses a different set of records to tabulate the votes. This is exactly like checking one ballot box to ensure that it's empty and then using a different, unchecked ballot box for the voted ballots. This is a serious design flaw that cannot be resolved by administrative procedures. Even if the county ensures that memory packs are reset properly, the fact that the "zero report" is NOT based on the records used to tally the votes means that the zero report (essential to ensuring that only valid votes are counted) is a meaningless report. The very method used to generate the zero report allows the WinEDS system to report inaccurate results.

The bottom line is that, because of these two defects, the system can and has been shown to produce inaccurate results. Thus, using it in an election would be a violation of federal law, and certifying it for use in Washington would be a violation of State law.

Federal law, State law, administrative code all dictate what the panel's decision must be. In order to follow the law, the panel can only recommend against certifying this system.

Federal law: The Help America Vote Act of 2002, Section 301(a)(5) requires that any voting system used in the United States must meet the accuracy standard spelled out in the 2002 Voting System Standard. Explicitly intending to ensure absolute accuracy, that standard allows only one error in every 10,000,000 ballot positions. The error encountered during testing far exceeded the federally required maximum error rate.

State law: RCW 29A-12-080 states, in part:

"Requirements for approval.

"No voting device shall be approved by the secretary of state unless it: . . .

"(4) Correctly registers all votes cast for any and all persons and for or against any and all measures;"

Administrative rule: WAC 434-335-040 echoes the words of the RCW:

“1) No voting device or its component software may be certified by the secretary of state unless it: . . .

“(c) Correctly registers all votes cast for any and all persons and for or against any and all measures;”

The vendor has proposed two workarounds to the system’s software defects:

- 1) An alteration of the software in the Insight scanner to ensure that if a reset is interrupted by a power off, the Insight will detect it and complete the reset when it is next powered on.
- 2) An alteration of the WinEDS software to check for a discrepancy between the tabulated results and the individual vote records on the memory pack, and to warn the operator of the discrepancy.

But even with the proposed changes, the system cannot be trusted to report accurate results:

- 1) Regarding the first proposed change: While their revision would correct the problem of an incomplete reset, there is no way of knowing whether a different event could cause a discrepancy between individual vote records and the tabulated results on the memory pack. The only way the state caught this flaw was because they knew what the expected results were. In a real election, there are no expected results with which to compare the reported results. So if the inaccuracy occurs in the primary – due to some other, as yet undiscovered cause – the inaccuracy is very likely to be undetected.

Further complicating this matter is the fact that results of Ranked Choice Voting are calculated in a complicated, non-intuitive way. So suspect results that might be noticed by an alert election administrator in an election using a traditional type of ballot would likely go unnoticed.

- 2) Regarding the second proposed change: By the State’s own experience during this very testing, displaying messages for operators were shown to be an ineffective workaround for a software defect. During testing, the worker who powered down the Insights failed to watch for a displayed message indicating the reset is complete. Yet, the vendor proposes using this same failed technique – displaying messages for operators – to resolve a software defect that can produce incorrect results.

Given the federal requirements governing the use of a voting system in a federal election, and given the state laws and administrative rules governing the certification of election equipment, the provisions of the law require you to recommend against certifying the WinEDS 4.0 system.

Certainly, the laws were not intended to allow approval of a system in which the electronic equivalent of a stuffed ballot box could go undetected.

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