



May 29, 2019

Submitted Electronically

Chairwoman Christy McCormick  
U.S. Election Assistance Commission  
1335 East-West Highway, Suite 4300  
Silver Spring, Maryland 20910

Re: Comments on EAC VVSG 2.0 of the U.S. Technology Policy  
Committee of the Association for Computing Machinery

Dear Chairwoman McCormick:

The Association for Computing Machinery (“ACM”) is the longest established and, with more than 100,000 global members, the largest association of individual professionals engaged in all aspects of computing in the world. A non-lobbying and otherwise wholly apolitical organization, ACM’s mission includes providing unbiased, expert technical advice to policy-makers on matters of our members’ wide-ranging expertise. That work is accomplished in the United States by and through ACM’s U.S. Technology Policy Committee (the “Committee”).

The Committee commends the Commission for opening this proceeding to refine the second iteration of its Voluntary Voting System Guidelines (“VVSG 2.0”) and, consistent with our mandate, is pleased to again<sup>1</sup> have the opportunity to assist the Election Assistance Commission. We look forward to future opportunities to comment in greater technical detail upon the means of implementing the high-level principles and guidelines that are currently (and we believe productively) the focus of this stage of the proceeding. For present purposes, the Committee wishes to:

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<sup>1</sup> Committee member David Wagner leads the security team of the EAC’s Technical Guidelines Development Committee (TGDC) on which Committee member Ron Rivest and Vice Chair Jeremy Epstein also previously sat. Epstein also served as a panelist at the EAC’s January 10, 2018 Summit on the 2018 election.

- associate itself with select comments, as detailed in the attached matrix, of several other respected civil society organizations with whom we are proud to again collaborate,<sup>2</sup> as well as with select points made in the individual filing of Dr. Philip Stark;
- clearly underscore that, to be as secure and verifiable as possible, *all* voting technology must be: **isolatable** from inherently vulnerable networks of all kinds; **inspectable** with very high confidence at every stage of operation; and **interoperable** to maximize efficiency and system modernity.

The Committee thus specifically and emphatically recommends that the final VVSG:

1. **Endorse a blanket ban on the internet connection capability of any and every voting technology addressed by the VVSG, including connection to any private network that ultimately may connect to the internet.** This categorical prohibition on the inclusion of any connectivity-enabling devices in election-related equipment include all wireless modems, radios, and any other type of equipment capable of communicating over the internet. *Simply disabling such devices if installed will not suffice to protect election networks, databases and equipment.*
2. **Foster and justify public confidence that our election results are wholly evidence-based by requiring that elections be fully and robustly auditable.** To accomplish this goal, *all post-election ballot audits must occur before results are finalized and certified.* Moreover, such universal post-election assessment must include both *compliance audits* that verify the audit trail and *risk-limiting* ballot audits that either validate the declared results or determine what the correct results should be.
3. **Require the full interoperability of all internal voting system components, peripherals and data formats, together with component and system integration testing and certification.** Component testing would significantly decrease vendor development and testing costs. Component certification, combined with interoperability, almost certainly would decrease the costs and increase the options of election officials by facilitating the modular replacement of only those portions of their systems that require upgrading rather than systems in their entirety, as is now the norm. Component testing also would lower the barriers to market entry for new and potentially innovative component-producing companies which would be relieved from the present burdens of having to develop complete election systems.

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<sup>2</sup> Specifically, the Committee has carefully reviewed and wishes to emphasize in the attached Appendix select additional Comments by the Electronic Privacy Information Center (EPIC), National Election Defense Coalition (NEDC), State Audit Working Group (SAWG), and Verified Voting (VV).

Thank you again for the opportunity to participate in this critical effort. Should you or your staff have any questions regarding these Comments, or seek further expert analysis or information our members may provide, please email Adam Eisgrau, ACM's Washington-based Director of Global Policy & Public Affairs, at the address below or reach him at 202-580-6555.

Sincerely,

A handwritten signature in black ink, appearing to read 'James A. Hendler', with a long horizontal flourish extending to the right.

James A. Hendler, Chair

*Appendix*