VVSG VERSION 1.1 REPORT
Prepared by The VVSG Ad Hoc Committee for the U.S. Election Assistance Commission's Standards Board, Executive Board

SUBSTANTIVE CHANGE RECOMMENDATIONS

Volume – Section – Title	Recommended Change
1 – 4.1.2.13 – Environmental Control – Operating Environment	Systems should at least meet these levels and if stated by manufacturer that the system can exceed these levels, test to those stated levels. Additional Recommendation:
1 – 4.1.2.13 – Environmental Control – Operating Environment	More EAC research is needed to set minimum low and high humidity levels (such as a survey of jurisdictions with extreme conditions).
1 – 7.9.1 – Display and Print a Paper Record	Since early voting machines may be used in multiple locations during the early voting period, the requirements in subsection (c) for the human-readable contents should be changed as follows: • In (c)(i), change "polling place" to "machine ID." This will help identify which machine was used to create the paper record. • In (c)(iii), change "ballot configuration" to "ballot style." • In (c)(iv), change "date of election" to "date of election or date record printed." Making the date selection a configurable item will accommodate those jurisdictions that have early voting.
1 – 7.9.2 – Approve or Void the Paper Record	Add a discussion section to clarify that the intent of subsection (a) is for voters to be able to compare the paper record with the choices on the screen.
1 – 7.9.2 – Approve or Void the Paper Record	Subsection (f) requires the VVPAT system to remove any indication of the voter's choices from the screen if the system reaches the configurable limit of rejected paper records. This requirement would limit an election official's ability to verify false claims from voters that the selections printed do not match the selections on the electronic record. Theoretically, a voter could shut down a machine if an election official is unable to verify the printed paper record matches the electronic record.

1 – 7.9.3 – Electronic and Paper Record Structure	• In subsections (e)(i) and (h)(i), remove "polling place" and replace with "machine ID." This will allow jurisdictions to identify which machine was used for the paper record. In subsections (e)(iii) and (h)(iii), replace "date of election" with "date of election or date record printed" to accommodate those jurisdictions that have early voting. • In subsections (f) and (h), replace "ballot configuration" with "ballot style." • In sub-section (f)(v), replace the word "ballot" with "paper record."
1 – 7.9.3 – Electronic and Paper Record Structure	The language in subsection (e)(iv) needs to be clarified. The requirement to print how many paper rolls were used may cause usability issues if the roll was removed to fix paper jam, but then re-inserted. The printer may not be able to detect that this was not a new roll. For auditing purposes, officials need to know the total paper records and this requirement is already in subsection (e)(v).
2 – 2.6.2 – Equipment and Data Security	Mandatory security procedures required in 2.6.2 should also be required in user documentation. This section addresses security procedures for "purchasing jurisdictions" that are mandatory in order to "prevent disruption of the voting process and corruption of voting data." Manufacturers should be required to include these mandatory procedures in the user documentation to ensure that purchasing jurisdictions are fully aware of the expectations.
2 – 2.6.4 System Event Logging	Define an "event" that must be logged.

CORRECTIONS

Volume – Section Number – Title	Recommended Correction
1 – 3.2.2.1 – Editable Interfaces	Discussion box under paragraph (f), second sentence: "…casting of two ballots" (along with more than two) is covered if worded "…casting of more than one ballot."
1 – 5.2.5 – Structured Programming	The first table in 5.2.5 references Visual Basic (VB) rather than .Net. VB is unsupported by Microsoft. Although it can be used for development, it would not be a wise choice.
1 – 5.2.5 – Structured Programming	http://www.eac.gov/voting systems/voluntaryvoting-guidelines/2002-voting-system-standards. This link referenced in the second footnote is broken and no replacement exists according to the EAC website.
1 – 5.2.5 – Structured Programming	The two paragraphs under 5.2.5 (a) that immediately precede 5.2.5 (b) should either be listed as "Discussion" or formatted properly. The paragraphs are: Wrapping legacy functions avoids the need to check for errors after every invocation, which both obfuscates the application logic and creates a high likelihood that some or many possible errors will not be checked for. In C++, it would be preferable to use one of the newer mechanisms that already throw exceptions on failure and avoid use of legacy functions altogether.
1 – 7.9 – Voter Verifiable Paper Audit Trail Requirements	In third bullet, remove abbreviation of VVPR and replace with "paper record." VVPR is not in Appendix A.
1 – 7.9.3 – Electronic and Paper Record Structure	• In subsection (a)(i), replace "ballot configuration" with "ballot style." • In subsection (a)(i), the term "counting context." This term is not in the glossary and if it remains, there needs to be an explanation of what it means.
1 – 7.9.6 – VVPAT Usability	The language in subsection (f) appears to be redundant with 7.9.3(i).
2 - 1.8.2.6 – Certification Test Practices	Numbering convention is off; start with "a."
2 – 2.6 – System Security Specification	Typo: first entry in table (pg 37), "This document shall identify the threats the voting system protects" should be "…protects against."
2 – 2.6.6 – Setup Inspection	Typo: in the Discussion box, "needs" should be "need."
2 – 3.2.2.2 – Non-Editable Interfaces	Typo: paragraph (a), (i.e., overvotes), one too many periods.
2 – 3.2.4 – Cognitive Issues	Typo; paragraph (c)(i) in discussion box, 'No', extra quotation mark.
2 – 3.3.6 - Hearing	Typo: paragraph (c), "Requirement" should be lower case.
2 – 5.4 – Source Code Review	Display the figures (illustrations) as deleted.

COMMENTS OR REQUESTS FOR CLARIFICATION – RESPONSES

Volume – Section – Title	Comment or Request for Clarification	Response/Clarification
2 – 2.6 – System Security Specification	The requirement for manufacturers to include in TDPs "All attacks the system is designed to resist or detect" and "Any security vulnerabilities known to the manufacturer" make the TDP a sensitive document. For the edification of election officials, what are the disposition and handling requirements of TDPs by the VSTL? Suggestion: include discussion section that directs reader to where this information may be found.	Manufacturers may indicate that specific information contained in the TDP is confidential. It would be recommended that manufactures indicate the responses to these two requirements as such.
2 – 5.4 – Source Code Review	Explain why the phrase "conformity may be subject to interpretation" is necessary within the paragraph just below bullet "b" on page 73. Is it possible to make the standard definitive?	This revision offers manufacturers the desired flexibility to choose a coding standard. When that coding standard is identified by the manufacturer, it will be used to test adherence.
2 – Appendix A.3.5 – Hardware Environmental Test Case Design	Page A-9: Make sure lab tests on various aspects are conducted in excess of 12 hours (normal election day conditions). All environmental tests should be conducted with no exclusions to simulate "real election day" conditions.	Generally, manufacturers will submit a limited number of devices for testing thereby making the simulation of certain "real election day" conditions problematic.