

United States Election Assistance Commission

Proposed guidance on Voluntary Voting System Guidelines

Agency: United States Election Assistance Commission (EAC)

Action: Notice of Proposed Voluntary Voting System Guidelines and request for comments

SUMMARY: EAC is proposing Voluntary Voting System Guidelines pursuant to Sections 221 and 222 of the Help America Vote Act of 2002 (HAVA) which was passed by Congress to modernize the administration of federal elections. This marks the first time in our nation's history that the federal government has funded an election reform effort. HAVA provides federal funding to help the States meet the law's uniform and non-discretionary administrative requirements, which include the following new programs and procedures: 1) provisional voting, 2) voting information, 3) statewide voter registration lists and identification requirements for first-time registrants, 4) administrative complaint procedures, and 5) updated and upgraded voting equipment.

HAVA also established the U.S. Election Assistance Commission (EAC) to administer the federal funding and to provide guidance to the States in their efforts to comply with the HAVA administrative requirements. Section 202 directs the EAC to adopt voluntary voting system guidelines, and to provide for the testing, certification, decertification, and recertification of voting system hardware and software. The purpose of the guidelines is to provide a set of specifications and requirements against which voting systems can be tested to determine if they provide all the basic functionality, accessibility, and security capabilities required of voting systems.

This document, the *Voluntary Voting System Guidelines*, is the third iteration of national level voting system standards. The Federal Election Commission published the *Performance and Test Standards for Punchcard, Marksense and Direct Recording Electronic Voting Systems* in 1990. This was followed by the *Voting Systems Standards* in 2002.

As required by HAVA, EAC formed the Technical Guidelines Development Committee (TGDC) to develop an initial set of recommendations for the *Guidelines*. This committee of 15 experts began their work in July 2004 and submitted their recommendations to the EAC in the 9-month timeline prescribed by HAVA. The TGDC was provided with technical support by the National Institute for Standards and Technology (NIST), who was given nearly \$3 million dollars by the EAC to complete this work. This funding represents the first time the federal government has spent a significant amount of money on setting guidelines for voting systems. These latest *Guidelines* update and augment the 2002 *Voting Systems Standards* to address increasingly complex voting system technology. Specifically, the 2005 *Guidelines* address the critical topics of accessibility, usability, and security. These *Guidelines* are voluntary. States may adopt them in whole, in part, or not at all. States may also choose to enact stricter performance requirements for certifying their voting systems.

The *Guidelines* consist of two volumes. Volume I, entitled “Voting System Performance Guidelines,” includes new requirements for accessibility, voting system software distribution, system setup validation, and the use of wireless communications. This volume also includes a set of optional requirements for a Voter Verified Paper Audit Trail component for Direct Recording Electronic voting systems for use by those States that have decided to require this feature for their voting systems. In addition, it contains

an updated glossary and a conformance clause. Volume II, entitled “Voting System National Certification Guidelines,” has been revised to reflect the new EAC process for national certification of voting systems. This process will go into effect in 2005 and will replace the voting system qualification process that has been conducted by the National Association of State Election Directors since 1994. Volume II also includes an updated appendix on procedures for testing system error rates. Terminology in both volumes has been revised to reflect new terminology introduced by HAVA. The following provides a summary of the contents of each volume.

Volume I Summary: Volume I, the Voting System Performance Guidelines, describes the requirements for the electronic components of voting systems. It is intended for use by the broadest audience, including voting system developers, manufacturers and suppliers; voting system testing labs; state organizations that certify systems prior to procurement; state and local election officials who procure and deploy voting systems; and public interest organizations that have an interest in voting systems and voting system standards. It contains the following sections:

- Section 1 presents the objectives and usage of the *Guidelines*, definitions of types of voting systems, and a discussion of how the guidelines and testing specifications are applied. It also contains a conformance clause.
- Section 2 describes the functional capabilities required of voting systems.
- Sections 3 through 5 describe specific performance standards for election system hardware, software and telecommunications.

- Section 6 is a significantly expanded section on security requirements for voting systems. It includes new material for the secure distribution of voting system software and for verifying that voting systems are operating with the correct software. There are also new requirements for the use of wireless communications. Since some States have decided to require a voter verified paper audit trail component for their direct recording electronic (DRE) voting systems, requirements are included to support appropriate testing of these components. These requirements are optional because there are other currently available technologies besides paper audit trails that can be employed to provide a second method, in addition to the DRE summary screen, for voters to verify their ballot choices. There was insufficient time to develop requirements for these other technologies for the present *Guidelines*, but these technologies, including audio, video, and cryptographic means, will be addressed in the near future.
- Sections 7 and 8 describe requirements for vendor quality assurance and configuration management practices and the documentation required about these practices for the certification process.
- Appendix A contains a glossary of terms.
- Appendix B provides a list of documents incorporated into the Guidelines by reference, as well as documents used in the preparation of the Guidelines.
- Appendix C contains best practices for election officials regarding accessibility, paper audit trails, and wireless.

- Appendix D presents an informational discussion of independent dual verification which is a concept being examined for potential future application to voting systems. In essence, this is a methodology to produce multiple independent records of ballot choices for verification purposes. Voter verified paper audit trails do not provide independent verification because the printer prints from the same data source that produces the DRE summary screen display.
- Appendix E contains the NASED Voting System Standards Board Technical Guide #1 on color and contrast adjustment for individuals with low vision or color blindness.

Volume II Summary: Volume II, the Voting System National Certification Testing Guidelines, is a complementary document to Volume I. Volume II provides an overview and specific detail of the national certification testing process, which is performed by independent voting system test labs accredited by the EAC. It is intended principally for use by vendors, test labs, and election officials who certify, procure, and accept voting systems. This volume contains the following sections:

- Section 1 presents an overview of the testing guidelines and the national certification testing process.
- Section 2 provides a description of the Technical Data Package that vendors are required to submit with their system for certification testing.
- Section 3 describes the basic functionality testing requirements.

- Sections 4 through 6 define the requirements for hardware, software and system integration testing.
- Section 7 describes the required examination of vendor quality assurance and configuration management practices.
- Appendix A provides the requirements for the National Certification Test Plan that is prepared by the voting system test lab and provided to the EAC for review.
- Appendix B describes the scope and content of the National Certification Test Report which is prepared by the test lab and delivered to the EAC along with a recommendation for certification.
- Appendix C describes the guiding principles used to design the voting system certification testing process. It also contains a revised section on testing system error rates.

The format of the *Guidelines* is intended to facilitate ease of identifying new information and comparison with the 2002 Voting Systems Standards. New material is indicated by a gray-shaded header with the words “NEW MATERIAL,” and includes line numbers. Material essentially carried forward in its entirety from the 2002 Voting Systems Standards remains in its original format and does not include line numbers. Selected portions of this material have been revised to reflect the EAC process for voting system certification, specifically Volume I, Section 1.6.1, and Volume II Section 1. Updates have been made throughout to include new terminology introduced by HAVA.

COMMENTS: The *Voluntary Voting System Guidelines* is provided for comment by the public for the next 90 days. All comments must be received by EAC on or before 5:00

p.m. EDT on September 30, 2005. All comments will be posted on the EAC website. The EAC is providing several alternative methods for submitting comments.

- On-line electronic comment form at www.eac.gov.
- By e-mail to votingsystemguidelines@eac.gov.
- By mail to Voting System Guidelines Comments, U.S. Election Assistance Commission, 1225 New York Ave, N.W., Suite 1100, Washington, D.C. 20005.
- By fax to Voting System Guidelines Comments at (202) 566-3127.

EAC requests that comments be provided according to the following specifications:

- (1) Comments regarding a particular section should be designated by the page, line (if included) and section number to which the comment refers.
- (2) Comments regarding a term that is included or that should be added to the glossary should reference the term and page number to which the comment refers.
- (3) General comments regarding the entire document or comments that refer to more than one section should be made as specifically as possible so that EAC can clearly understand to which portion(s) of the document the comment refers.
- (4) To the extent that a comment suggests a change in the wording of a requirement or section of the *Guidelines*, please provide proposed language for the suggested change.

TO OBTAIN A COPY OF THE VOLUNTARY VOTING SYSTEM GUIDELINES:

Due to the fact that the Voluntary Voting System Guidelines is more than 250 pages in length, the entire document has not been attached to this notice. A complete copy of the *Voluntary Voting System Guidelines* is available from EAC in electronic or hard copy

format. An electronic copy can be downloaded in PDF format or read in HTML version on EAC's website, www.eac.gov. In addition, interested persons may obtain a hard copy or CD-ROM electronic copy from EAC by contacting Voting System Guidelines, via fax at 202-566-3128, via email at VotingSystemGuidelines@eac.gov, or via mail at Voting System Guidelines, U.S. Election Assistance Commission, 1225 New York Avenue, NW, Suite 1100, Washington, D.C. 20005. You may also request by phone at (866) 747-1471. Please specify whether a hard copy or electronic copy is desired.

FOR FURTHER INFORMATION, CONTACT: Carol A. Paquette, phone (202) 566-3125, fax (202) 566-3128, e-mail cpaquette@eac.gov.