Voluntary Voting System Guidelines Overview

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The United States Congress passed the Help America Vote Act of 2002 (HAVA) to modernize the administration of federal elections, marking 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* (referred to herein as the *Guidelines* or *VVSG*), is the third iteration of national level voting system standards that has been developed. 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, the 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. 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.

Effective Date

The 2005 *VVSG* shall become effective 24 months after their final adoption by the EAC. At that time, every component of every system submitted for national certification testing shall be tested for conformance with the *VVSG*. Adoption of these guidelines is voluntary, so during this 24-month period, States may adopt them in whole or in part at any time, and thereby require their systems to meet these guidelines. However, the effective date provision does not apply to the HAVA Section 301(a) mandatory requirements, which all States must comply with by January 1, 2006.

Summary of Changes

Volume I of the *Guidelines*, entitled *Voting System Performance Guidelines*, includes new requirements for usability, 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 Verifiable Paper Audit Trail (VVPAT) component for Direct-Recording Electronic (DRE) voting systems. In addition, this volume includes an updated glossary and a conformance clause.

Volume II of the *Guidelines*, entitled *National Certification Testing 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 (NASED) 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.

Volume I – *Voting System Performance Guidelines* 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 I describes the purpose and scope of the guidelines.

Section 2 describes the basic functional capabilities required of voting systems.

Section 3 describes standards to make voting systems more usable and accessible to as many eligible citizens as possible, whatever their physical abilities, language skills, or experience with technology.

Sections 4 through 7 describe specific performance standards for election system hardware, software, telecommunications, and security.

Sections 8 and 9 describe requirements for vendor quality assurance and configuration management practices and the documentation about these practices required to be submitted for the EAC certification process.

Appendix A contains a glossary of terms.

Appendix B provides a list of related standards documents incorporated into the *Guidelines* by reference, as well as documents used in the preparation of the *Guidelines,* and legislation that is referenced.

Appendix C presents an informational discussion of independent verification systems as a potential concept for future voting system security design.

Appendix D contains technical guidelines on color, contrast and text size adjustment for individuals with low vision or color blindness.

Volume II – *National Certification Testing Guidelines* Summary

Volume II, the *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 describes the purpose of the National Certification Testing Guidelines.

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 section on testing system error rates.