

Memorandum

To: File

From: Clifford D. Tatum, General Counsel

Re: Review of the Help America Vote Act and the Development of the Voluntary Voting System Guidelines

Background

This memorandum is a review of the Help America Vote Act of 2002 (HAVA) as it relates to the development of the Voluntary Voting System Guidelines 2.0 (VVSG 2.0), Principles and Guidelines, Technical Requirements and Test Assertions for certifying voting systems under the testing and certification process of HAVA.

The Executive Director has posed several questions related to the meaning of the VVSG, the scope of the VVSG, the process related to the development of the VVSG, and the implications related to the draft manuals provided by the Test and Certification team. This memo will address each of the questions and provide an analysis for the Commissioners to consider when discussing and adopting the VVSG.

Questions presented from the Executive Director

- a. A thorough legal analysis to demonstrate that the VVSG complies explicitly with HAVA and, if there are areas that do not, what those are.

The recommended VVSG 2.0 Principles and Guidelines as proposed comply with the provisions of HAVA in that they incorporate the voting system standards as set forth in Section 301 of HAVA. Additionally, the development of the Principles and Guidelines have followed the process as set forth in Section 222.

The underlying question is whether HAVA allows the VVSG to be developed and adopted in separate components as the Principles and Guidelines, the Technical Requirements and the Test Assertions. The answer to this question is yes. HAVA does not specify the format nor the contents of the VVSG.

- b. Is it possible for a system to be HAVA compliant that is not VVSG 2.0 compliant; similarly, would it be possible for a system to be VVSG 2.0 compliant and not HAVA Compliant? In either case, what is the impact on HAVA Funds distributed to the states that might be used for voting systems?

Yes, it is possible for a voting system to be HAVA compliant that is not VVSG 2.0 compliant as long as the voting system contains the standards set forth in Section 301. The VVSG sets forth requirements and specifications that a system must demonstrate in order to show that it conforms to the voting system standards;

however, those guidelines may also include requirements and specifications that go beyond the minimum performance standards set forth in HAVA.

It is possible that a voting system could contain the minimum performance standards, but not meet some of the specifications and requirements set forth in the VVSG, and thus not receive EAC certification. As an example, if the VVSG does not allow for modernizing to be included in a voting system, but the voting system has all of the functional requirements of HAVA, it would meet the statutory minimum of a voting system, but not receive certification from the EAC because it has components that the VVSG doesn't allow.

However, it is not possible for a voting system to receive EAC certification and not be HAVA compliant.

- c. A legal interpretation that considers if VVSG includes Requirements or just VVSG and, if it includes Requirements, does it also include Test Assertions? Further, how does the word "Standard" in HAVA relate to all of this?

Voluntary Voting System Guidelines are themselves standards and requirements. Standards are a set of specifications that describe what a voting system must do in order to demonstrate that it works properly. Standards and requirements are often used synonymously to identify the specifications that must be met in order to demonstrate that a system does what it is supposed to do. There are goal level standards and requirements, functional standards and requirements, and technical standards and requirements (described herein). Test Assertions are the testing protocols used to demonstrate that the system meets the goal level requirements, the functional requirements and the technical requirements.

HAVA uses the terms Standards and Requirements in Section 301, however it does not provide a specific definition for the terms. Section 301 identifies minimum voting system standards, but does not prescribe how these standards are to be met.

Section 231 provides that the Commission shall provide for the testing and certification of voting systems. This provision authorizes the EAC to establish a testing and certification program that will prescribe how voting systems will be tested.

- d. Given c, what is the role, if any, of the TGDC going forward?

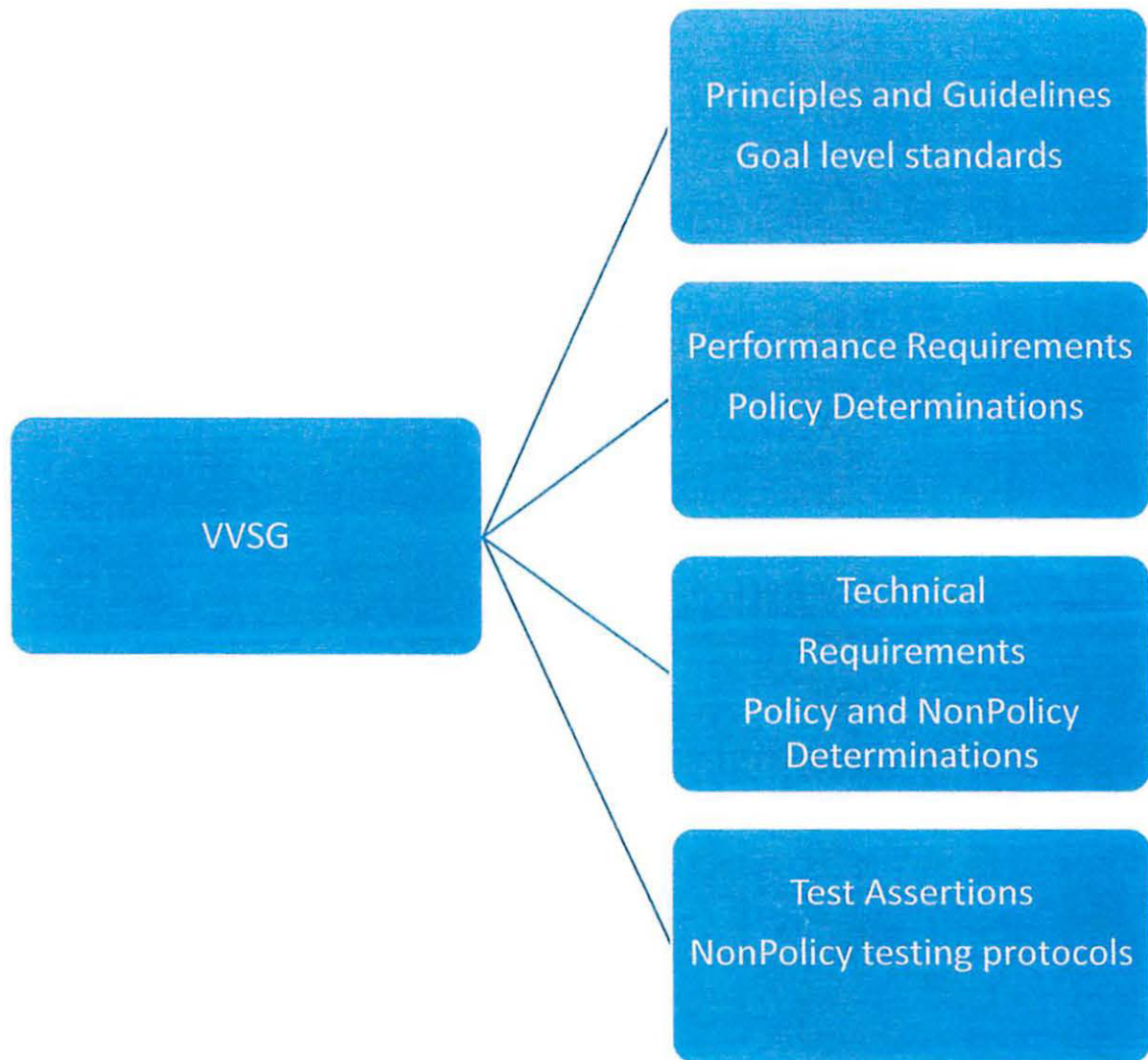
The TGDC has a statutory role to assist the EAC in developing goal level standards and requirements as well as technical standards and requirements, no matter the format or the process in which these standards and requirements are developed. Even if the goal level standards are separated from the technical requirements and developed in separate stages, the standards and requirements as well as the test assertions are all dependencies in the testing and certification process. The TGDC would always be involved in the process of developing standards and requirements

- e. Please provide a detailed flow chart related to HAVA that shows approval processes going forward related to the Executive Director, Standards Board, Board of Advisors, and Commission.

See attached flow chart.

(b) (5)





Guidelines and Principles

- NIST Development
- TGDC - Working Group and Development Committee review
- Advisory Board review
- Standards Board review
- Public Comment
- Adoption by Commissioners

Performance Requirements

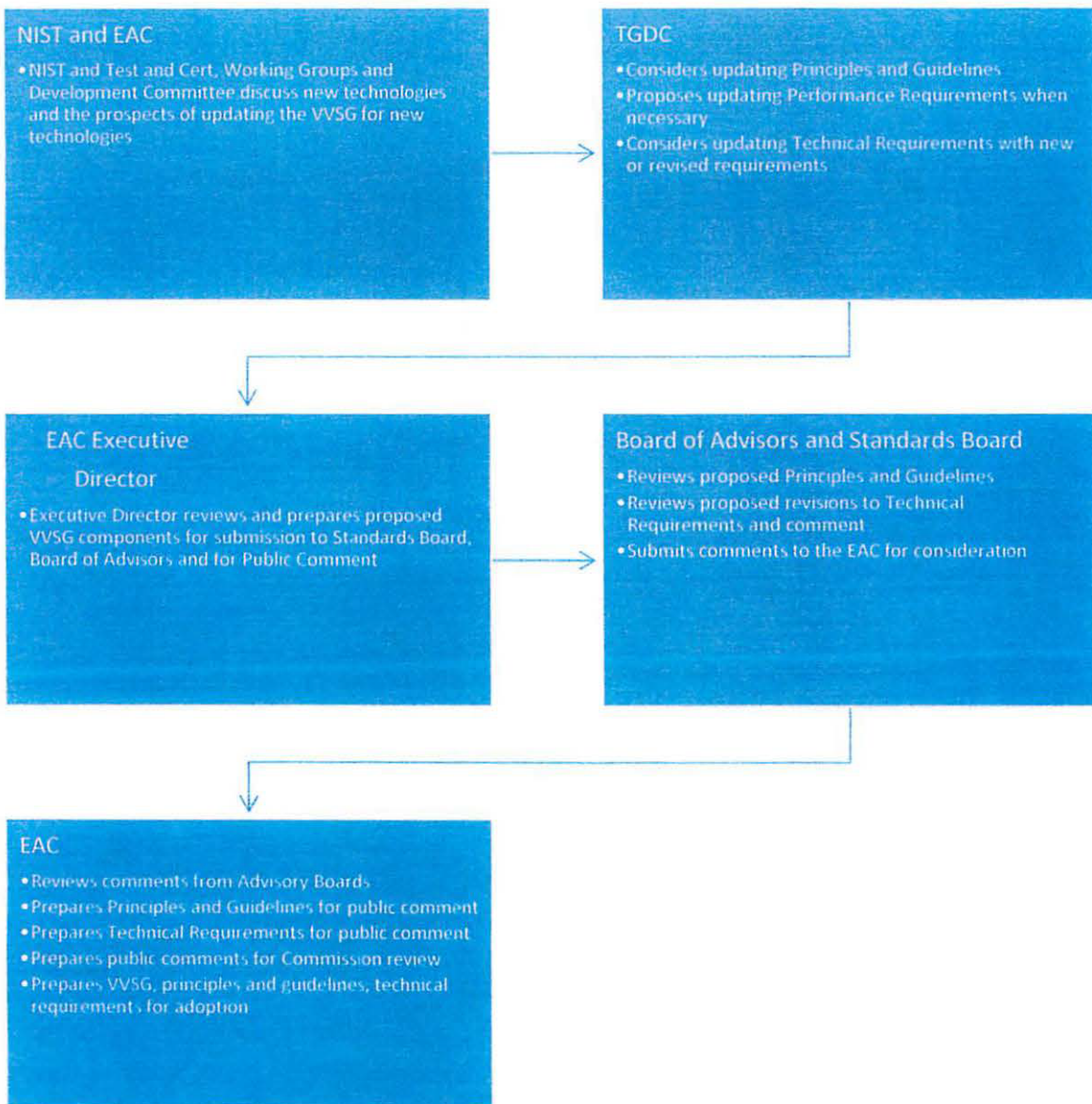
- NIST Development
- TGDC - Working Group and Development Committee review
- Advisory Board review
- Standards Board review
- Public Comment
- Adoption by Commissioners

Technical Requirements

- NIST Development
- TGDC - Working Group and Development Committee review
- Advisory Board review
- Standards Board review
- Public Comment
- Adoption by Commissioners

Test Assertions

- NIST Development
- TGDC - Working Group and Development Committee review
- Advisory Board review - optional
- Standards Board review - Optional
- Public Comment - Manufacturers and Test Labs
- Implementation by Test & Cert



Overview

Origins of the Voluntary Voting System Guidelines (VVSG)

The VVSG are a set of federal specifications and requirements against which a voting system is tested to determine if the system meets required standards under a conformance assessment process. The VVSG began as Voting System Standards (VSS) developed by the Federal Election Commission in 1990.

History

In 1975, the Office of Federal Elections of the General Accounting Office, now known as the Federal Election Commission (FEC) requested the National Institute of Standards and Technology (NIST), formerly known as the National Bureau of Standards, to conduct a study on the use of computers and vote tallying. The study and report issued by NIST concluded that there were significant problems with the technology used to count votes. (Report Entitled Effective Use of Computing Technology in Vote-Tallying, a 1975 report.) [Endnote 1]

As a result of this report, Congress authorized the FEC, in cooperation with the NIST, to conduct a study and report on the feasibility of developing "voluntary engineering and procedural performance standards for voting systems used in the United States." (See P.L. 96-187 January 8, 1980.) [Endnote 2]

This law required the FEC to report to the Congress the results of the study and include recommendations, if any, for the implementation of a program of such standards (including estimates of the costs and time requirements of implementing such a program). [Endnote 3]

The FEC, with the support of the NIST, released its study on the feasibility of implementing voting system standards in 1982. In 1990 the FEC issued the first-ever voluntary standards for punch card, optical scan and DRE voting systems, known as the Voting System Standards (VSS). These standards were the first of their kind to be used by voting system manufacturers and election officials to assess the quality of voting systems. [Endnote 4]

While these standards were the first of their kind adopted by a federal entity, the FEC was not authorized to evaluate nor ensure that voting system manufacturers were building their systems to those standards. The manufacturers, through independent testing authorities, conducted their own tests to the standards. The National Association of State Election Directors (NASED), a non-government entity, then reviewed the test reports issued by the test labs and issued a NASED number to the system indicating that the system had been tested to the FEC 1990 voluntary standards. The VSS were updated by the FEC in 2002 to reflect changes in technology. These became the 2002 VSS.

With the passage of the Help America Vote Act of 2002 (HAVA) and the creation of the Election Assistance Commission (EAC), the federal government took an active role in certifying voting systems and ensuring that voting system manufacturers built systems that conformed to voting system standards.

EAC Statutory Authority and the Creation of the EAC, the Voluntary Voting System Guidelines and the Testing and Certification Program

Congress created the EAC and transferred the duties for the development of the Voting System Standards to the EAC, along with other duties. 52 U.S.C. § 21131 formerly 42 USC § 15531(a); HAVA Section 801.

HAVA authorized the EAC to establish new Voluntary Voting System Guidelines and set forth a process for developing the guidelines and adopting the guidelines. Section 221 (establishment of the Technical Guidelines Development Committee); Section 222 (Process for Adoption); and Sections 211 and 213 (Establishment of the Standards Board and Board of Advisors); and Section 212 (Duties of the Standards Board and Board of Advisors.)

Congress also specifically provided that the most recent set of VSS adopted by the FEC prior to the date of enactment of HAVA would be the first set of Voluntary Voting System Guidelines adopted under Section 222. (Special Rule for Initial Set of Guidelines.) This transition provision set the initial Voluntary Voting System Guidelines in the same format as the last adopted VSS by the FEC.

HAVA also charged the EAC with the testing and certification, decertification and recertification of voting system hardware and software by accredited laboratories. (Section 231(a)); and evaluating and accrediting laboratories with the recommendation and assistance of NIST. (Section 231(b).)

Development and Structure of the VVSG

Historically, the VVSG has included performance standards, technical requirements and testing procedures. These three components are dependents of one another. Performance standards described what the system is supposed to do. The technical standards described the specifications that a system must include and how it must perform in order to meet the performance standards. The test assertions were an extension of the technical requirements in that they describe the testing protocols used to demonstrate the system meets the technical requirements and the performance standards.

The performance standards alone are not enough to build a voting system. The performance standards generally do not contain technical specifications; thus they do not provide guidance on what a voting system should include or how a voting system should operate in order to demonstrate that it meets the performance standards. The requirements, along with the performance standards, are what is used to demonstrate that the system can in fact accomplish the goals of the performance standard. The test

assertions are used to demonstrate that the system meets the requirements and meets the performance standards.

(b) (5)



Definition of Standards, Requirements and Test Assertions

HAVA does not specifically define the term “standards” or “requirements”, but uses each of these terms in Title III Subtitle A - Requirements, and Section 301 entitled “Voting Systems Standards” and 301(a) subtitled –“Requirements.” See Appendix A for HAVA statutory language.

Section 301(a), subtitled “Requirements,” sets forth what appears to be performance level requirements (or goals and functions) of what a voting system in a federal election must accomplish. Section 301(a) does not set forth technical specifications nor test assertions. The minimum voting system standards as set forth in Section 301 are:

- Permit the voter to verify (in a private and independent manner) the votes selected by the voter on the ballot before the ballot is cast and counted;
- Provide the voter with the opportunity (in a private and independent manner) to change the ballot or correct any error before the ballot is cast and counted (including the opportunity to correct the error through the issuance of a replacement ballot if the voter was otherwise unable to change the ballot or correct any error);
- Audit capacity
- Accessibility for individuals with disabilities
- Alternative language accessibility
- Error rates and a few more specifics associated to each standard list above.

In identifying a definition of a standard and requirement for these purposes, I reviewed the National Technology Transfer and Advancement Act of 1995 (the NTTAA) (1996) and OMB Circular No. A-119, Revised (1998).

The OMB Circular No. A- 119 defines the term “standard” or “technical standard” to include the following:

- (1) Common and repeated use of rules, conditions, guidelines or characteristics for products or related processes and production methods, and related management systems practices.

- (2) The definition of terms; classification of components; delineation of procedures; specification of dimensions, materials, performance, designs, or operations; measurement of quality and quantity in describing materials, processes, products, systems, services, or practices; test methods and sampling procedures; or descriptions of fit and measurements of size or strength.

The OMB Circular further defines a performance standard as a standard that states requirements in terms of required results, but without stating the methods for achieving the required results. A performance standard may define the functional requirements for an item, operational requirements, and/or interface and interchangeability characteristics.

The NTTAA defines the term “technical standards” to mean performance based or design-specific technical specifications and related management systems practices.

Several aspects of these definitions are incorporated into the historical development of the VVSG and in the proposed iteration of VVSG 2.0.

For clarification purposes, this analysis uses the term “standards” to identify the goal/functional performance of a voting system as set forth in Section 301; the term “requirements” to identify the technical specifications that a voting system must possess in order to demonstrate that it meets the standards set forth in Section 301; and the term “test assertions” to describe the test protocols that a voting system must progress through in order to demonstrate that it possesses the specifications necessary to meet the functional performance of a voting system and achieve certification under the testing and certification program operated by the EAC.

Development Process of the VVSG

While HAVA does not provide a definition or a format of what the VVSG must look like nor does it provide guidance on the content or layout, it does include within its statutory scheme elements of the “consensus development process” as identified in the National Technology Transfer and Advancement Act of 1995 (the NTTAA) (1996) and in OMB Circular No. A-119, Revised (1998). OMB Circular No. A-119 describes the consensus development process to include openness, balance, due process, and consensus.

As set forth in Sections 211, 212, 213 and 221 of HAVA, the EAC Advisory Boards consisting of state and local election officials, technology experts, advocacy stakeholders, industry state holders, and politically appointed member representatives all participate in the development of the VVSG. Additionally, Section 222 requires public comment on the proposed VVSG prior to the commission voting to adopt the VVSG. The diverse groups commenting on the proposed guidelines, the multiple advisory bodies created by HAVA participating in the VVSG development process and the public comment component parallel the standards development process identified in the NTTAA and OMB Circular No. A-119.

Role of the TGDC

The initial development of the VVSG, which included standards, requirements and test assertions, was and is facilitated by NIST and the TGDC – the Development Committee. The proposed VVSG is reviewed by the Standards Board and the Board of Advisors for comment and feedback and then presented for public review and comment, all before a vote can be conducted by the EAC commissioners to adopt the VVSG as final.

NIST is charged with providing technical support to the Development Committee on all aspects of the voting system standards as described by Section 301. NIST's technical support includes intramural research and development in areas supporting the development of the VVSG including:

- security of computers,
- computer networks,
- computer data storage in voting systems
- methods to detect and prevent fraud
- the protection of voter privacy
- the role of human factors in design and application of voting systems – including assistive technologies for individuals with disabilities and varying levels of literacy and remote access, including voting through the internet.

As the NIST research results are considered and included in discussions with the public working groups and subsequently included in discussions with the TGDC when developing standards and requirements, and based on the HAVA provisions regarding the development of the VVSG in any format or iteration, the NIST, TGDC, the Advisory Board and the Standard Board would always be involved in the development of standards, requirements and certain aspects of the test assertions.

Additionally, because OMB Circular No. A-119 and the NTTAA provides guidance to all federal agencies to utilize the consensus building process for developing standards for regulatory matters or program activities, the use of the advisory boards would always be necessary and required.

PURPOSE OF THE VVSG

The VVSG were established as a tool to be used by the EAC Testing and Certification program and the voting system test laboratories to certify or decertified voting systems under the HAVA process. This is evident through the transitional language of HAVA, wherein it transfers the VSS from the FEC to the EAC with the added authoritative language for the EAC to operate a testing and certification program to ensure the vendors are building voting systems that adhere to the Guidelines. The underlying premise of the original VSS and its goals were to develop voluntary standards to ensure that voting systems were operating accurately, effectively, securely and efficiently.

The purpose of the VVSG and the testing and certification program is to ensure that voting systems are tested to the VVSG for certification. Prior to the passage of HAVA, the industry used the VSS standards, but did not have a federal entity ensuring that the voting systems were being developed, maintained, or updated to those guidelines. This void was resolved with the passage of HAVA and the creation of the EAC.

In order for a voting system to receive certification from the EAC, that voting system and all its corresponding components must meet all applicable guidelines contained within the VVSG. The Principles and Guidelines proposed in the VVSG include all of the minimum standards as set forth within Section 301.

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→ Recommendation:

The VVSG should be separated into multiple components – the principles and guidelines (goal requirements), the technical requirements (technical specifications) and the test assertions (test protocols). As the principals and guidelines are goal oriented (similar to strategic plans), I believe they should be voted on by the Commissioners. The technical requirements are functional oriented, which includes both policy-type decisions and technical specifications that are not exactly policy recommendations. The Test Assertions are very technical in nature and do not require consideration by the Commissioners.

However, until NIST and the TGDC can successfully categorize the requirements into technical requirements versus policy oriented requirements, I believe the Commission should vote on the initial set of Technical Requirements, and develop a policy that allows for the Technical Requirements to be updated without a vote of the commission in certain circumstances. The process, as recommended by OMB A-119, requires several steps that ensure an openness, balance, due process, appeals process and consensus

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Appendix A

Statutory Review

The statutory review of HAVA voting system standards, the development of voluntary voting system guidelines – standards and requirements, test assertions, and the testing and certification of voting systems begins with a review of 52 U.S.C.A. § 21081, formerly cited as “42 USCA §15481” entitled Voting Systems Standards - Section 301; Section 202, duties of the Election Assistance Commission; Section 221 Technical Guidelines Development Committee; and section 231 Certification and testing of voting systems

Section 301(a) entitled “Requirements” establishes the minimum voting system requirements that a voting system must include in order to be HAVA complaint. Section 301 provides the following:

Each voting system used in an election for Federal office shall meet the following requirements:

1. In General

(A) Except as provided in subparagraph (B), the voting system (including any lever voting system, optical scanning voting system, or direct recording electronic system) shall-

(i) permit the voter to verify (in a private and independent manner) the votes selected by the voter on the ballot before the ballot is cast and counted;

(ii) provide the voter with the opportunity (in a private and independent manner) to change the ballot or correct any error before the ballot is cast and counted (including the opportunity to correct the error through the issuance of a replacement ballot if the voter was otherwise unable to change the ballot or correct any error); and

(iii) if the voter selects votes for more than one candidate for a single office--

(I) notify the voter that the voter has selected more than one candidate for a single office on the ballot;

(II) notify the voter before the ballot is cast and counted of the effect of casting multiple votes for the office; and

(III) provide the voter with the opportunity to correct the ballot before the ballot is cast and counted.

(B) A State or jurisdiction that uses a paper ballot voting system, a punch card voting system, or a central count voting system (including mail-in absentee ballots and mail-in ballots), may meet the requirements of subparagraph (A)(iii) by--

(i) establishing a voter education program specific to that voting system that notifies each voter of the effect of casting multiple votes for an office; and

(ii) providing the voter with instructions on how to correct the ballot before it is cast and counted (including instructions on how to correct the error through the issuance of a replacement ballot if the voter was otherwise unable to change the ballot or correct any error).

(C) The voting system shall ensure that any notification required under this paragraph preserves the privacy of the voter and the confidentiality of the ballot.

(2) Audit capacity

(A) In general

The voting system shall produce a record with an audit capacity for such system.

(B) Manual audit capacity

(i) The voting system shall produce a permanent paper record with a manual audit capacity for such system.

(ii) The voting system shall provide the voter with an opportunity to change the ballot or correct any error before the permanent paper record is produced.

(iii) The paper record produced under subparagraph (A) shall be available as an official record for any recount conducted with respect to any election in which the system is used.

(3) Accessibility for individuals with disabilities

The voting system shall--

(A) be accessible for individuals with disabilities, including nonvisual accessibility for the blind and visually impaired, in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters;

(B) satisfy the requirement of subparagraph (A) through the use of at least one direct recording electronic voting system or other voting system equipped for individuals with disabilities at each polling place; and

(C) if purchased with funds made available under subchapter II on or after January 1, 2007, meet the voting system standards for disability access (as outlined in this paragraph).

(4) Alternative language accessibility

The voting system shall provide alternative language accessibility pursuant to the requirements of section 10503 of this title.

(5) Error rates

The error rate of the voting system in counting ballots (determined by taking into account only those errors which are attributable to the voting system and not attributable to an act of the voter) shall comply with the error rate standards established under section 3.2.1 of the voting systems standards issued by the Federal Election Commission which are in effect on October 29, 2002.

(6) Uniform definition of what constitutes a vote

Each State shall adopt uniform and nondiscriminatory standards that define what constitutes a vote and what will be counted as a vote for each category of voting system used in the State.

Section 301 goes further to define a voting system. Section 301(b) provides for the definition of a voting system. A voting system is defined as -

- (1) the total combination of mechanical, electromechanical, or electronic equipment (including the software, firmware, and documentation required to program, control, and support the equipment) that is used-
 - (A) to define ballots;
 - (B) to cast and count votes ;
 - (C) to report or display election results; and
 - (D) to maintain and produce any audit trail information; and
- (2) the practices and associated documentation used-
 - (A) to identify system components and versions of such components;
 - (B) to test the system during its development and maintenance;
 - (C) to maintain records of system errors and defects;

- (D) to determine specific system changes to be made to a system after the initial qualification of the system; and
- (E) to make available any materials to the voter (such as notices, instructions, forms, or paper ballots).

Section 301 (c) provide in general that:

“Nothing in this section shall be construed to prohibit a State or jurisdiction which used a particular type of voting system in the elections for Federal office held in November 2000 from using the same type of system after the effective date of this section, so long as the system meets or is modified to meet the requirements of this section.

Section 301 further protects the use of paper ballot voting systems by providing the following:

[f]or purposes of subsection (a)(1)(A)(i), the term "verify" may not be defined in a manner that makes it impossible for a paper ballot voting system to meet the requirements of such subsection or to be modified to meet such requirements.

Additionally, Section 301(b) also provides for the definition of a voting system to be:

- (1) the total combination of mechanical, electromechanical, or electronic equipment (including the software, firmware, and documentation required to program, control, and support the equipment) that is used-
 - (A) to define ballots;
 - (B) to cast and count votes;
 - (C) to report or display election results; and
 - (D) to maintain and produce any audit trail information; and
- (2) the practices and associated documentation used-
 - (A) to identify system components and versions of such components;
 - (B) to test the system during its development and maintenance;
 - (C) to maintain records of system errors and defects;
 - (D) to determine specific system changes to be made to a system after the initial qualification of the system; and
 - (E) to make available any materials to the voter (such as notices, instructions, forms, or paper ballots).

Finally, Section 301 provides for the statutory construction of the section in general in the following manner:

Section (c) – Construction provides that

Nothing in this section shall be construed to prohibit a State or jurisdiction which used a particular type of voting system in the elections for Federal office held in November 2000 from using the same type of system after the effective date of this section, so long as the system meets or is modified to meet the requirements of this section.

The statutory construction also provides for the protection of paper ballot voting systems in the following manner:

(2) Protection of paper ballot voting systems

For purposes of subsection (a)(1)(A)(i), the term "verify" may not be defined in a manner that makes it impossible for a paper ballot voting system to meet the requirements of such subsection or to be modified to meet such requirements.

Summary of 301(a)

Section 301(a) provides that the minimum functional requirements that a voting system must include to be HAVA compliant must allow the following:

- (1) the voter to review his or her selections prior to casting a ballot;
- (2) the voter to change his or her selections prior to casting a vote;
- (3) the voter to be notified when more than one selection is made in a single race than are permitted (overvote);
- (4) for the production of a permanent paper record suitable to be used in a manual recount;
- (5) for voters with disabilities, including visual disabilities to vote independently and privately;
- (6) for a voter with limited English proficiency to be provided a ballot and voting instructions in languages required by Section 203 of the Voting Rights Act; and
- (7) for an error rate in operating the voting system that is no greater than the error rate set forth in Section 2.3.1 of the 2002 Voting System Standards adopted by the Federal Election Commission. See Table A below.

**Appendix B
Requirements.**

A voting system (including lever systems, optical scan, and DREs) shall

Permit the voter to verify (in a private and independent manner) the votes selected by the voter on the ballot before the ballot is cast and counted;*	Provide the voter with the opportunity (in a private and independent manner) to change the ballot or correct any error before the ballot is cast and counted (including the opportunity to correct the error through the issuance of a replacement ballot if the voter was otherwise unable to change the ballot or correct any error); and	If the voter selects votes for more than one candidate for a single office--	Notify the voter that the voter has selected more than one candidate for a single office on the ballot;
			Notify the voter before the ballot is cast and counted of the effect of casting multiple votes for the office; and
			Provide the voter with the opportunity to correct the ballot before the ballot is cast and counted.
Audit			

A paper ballot voting system, a punch card voting system, or a central count voting system (including mail-in absentee ballots and mail-in ballots), may meet the requirements of subparagraph (A)(iii) by	
<p>(i) establishing a voter education program specific to that voting system that notifies each voter of the effect of casting multiple votes for an office; and</p> <p>(ii) providing the voter with instructions on how to correct the ballot before it is cast and counted (including instructions on how to correct the error through the issuance of a replacement ballot if the voter was otherwise unable to change the ballot or correct any error).</p>	
The voting system shall ensure that any notification required under this paragraph preserves the privacy of the voter and the confidentiality of the ballot.	
The voting system shall produce a record with an audit capacity for such system.	The voting system shall: (1) produce a permanent paper record with a manual audit capacity for such system; (2) provide the voter with an opportunity to change the ballot or correct any error before the permanent paper record is produced; and (3) The paper record produced shall be available as an official record for any recount conducted with respect to any election in which the system is used.

Accessibility for individuals with disabilities

The voting system shall--

(B) be accessible for individuals with disabilities, including nonvisual accessibility for the blind and visually impaired, in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters;

(C) satisfy the requirement of subparagraph (A) through the use of at least one direct recording electronic voting system or other voting system equipped for individuals with disabilities at each polling place; and

(D) if purchased with funds made available under subchapter II on or after January 1, 2007, meet the ting system standards for disability access (as outlined in this paragraph).

Alternative language accessibility

The voting system shall provide alternative language accessibility pursuant to the requirements of section 10503 of this title.

Error rates

The error rate of the voting system in counting ballots (determined by taking into account only those errors which are attributable to the voting system and not attributable to an act of the voter) shall comply with the error rate standards established under section 3.2.1 of the voting systems standards issued by the

Uniform definition of what constitutes a vote

Each State shall adopt uniform and nondiscriminatory standards that define what constitutes a vote and what will be counted as a vote for each category of voting system used in the State.

(b) Definition of a Voting System

"voting system" means--

(1) the total combination of mechanical, electromechanical, or electronic equipment (including the software, firmware, and documentation required to program, control, and support the equipment) that is used--

- a. to define ballots;
- b. to cast and count votes;
- c. to report or display election results; and
- d. to maintain and produce any audit trail information; and

(2) the practices and associated documentation used--

- a. to identify system components and versions of such components;
- b. to test the system during its development and maintenance;
- c. to maintain records of system errors and defects;
- d. to determine specific system changes to be made to a system after the initial qualification of the system; and
- e. to make available any materials to the voter (such as notices, instructions, forms, or paper ballots).

(c) Statutory Construction**In General**

Nothing in this section shall be construed to prohibit a State or jurisdiction which used a particular type of voting system in the elections for Federal office held in November 2000 from using the same type of system after the effective date of this section, so long as the system meets or is modified to meet the requirements of this section.

Protection of paper ballot voting systems *

For purposes of subsection (a)(1)(A)(i), the term "verify" may not be defined in a manner that makes it impossible for a paper ballot voting system to meet the requirements of such subsection or to be modified to meet such requirements.

(b) (5)



(b) (5)



(b) (5)

