

**Matrix Correspondence of TGDC Resolutions to NIST Work Product:**

**A Report to the TGDC**

**September 1, 2007**

This paper has been prepared by the National Institute of Standards and Technology (NIST) by direction of the working subcommittees of The Technical Guidelines Development Committee (TGDC). It may represent preliminary research findings and does not necessarily represent policy positions of NIST or the TGDC.

The Technical Guidelines Development Committee (TGDC) is a Federal Advisory Subcommittee to the Election Assistance Commission (EAC) that recommends Voluntary Voting System Guidelines (VVSG). Both the TGDC and EAC were established by the Help America Vote Act of 2002. NIST serves as technical advisor to the TGDC.

## Acronyms and Terms Used in This Report

The following acronyms and terms are used in this report and accompanying matrix. Some of these terms are also defined in the draft VVSG (NEXT) [*formerly referenced as VVSG (2007)*] glossary, located at: <http://vote.nist.gov/TGDC/VVSG-Draft-07202007.pdf> (Appendix A):

- **ANSI**– American National Standards Institute
- **EAC** – United States Election Assistance Commission
- **EBM** – Electronic Ballot Marking device, e.g., the ES&S AutoMARK
- **CRT** – Core Requirements and Testing Subcommittee of the TGDC
- **DRE** – Direct Record Electronic voting systems
- **HAVA** – Help America Vote Act
- **HFP** – Human Factors and Privacy Subcommittee of the TGDC
- **IDV/IV** – Independent Dual Verification, shortened to Independent Verification
- **ITAA** – Information Technology Association of America
- **MTBF** – Mean Time Between Failure
- **NASED**– National Association of State Election Directors
- **NIST** – National Institute of Standards and Technology
- **NSRL** – National Software reference Library
- **Op Scan** – voting systems in which a voter completes a paper ballot, either by hand or via an EBM, and then the ballot is scanned by an optical scanner
- **OEVT** – Open Ended Vulnerability Testing
- **SI** – Software Independence or Independent
- **STS** - Security and Transparency Subcommittee of the TGDC
- **TGDC** - Technical Guidelines Development Committee
- **DRE-VVPAT** – A DRE with Voter Verifiable Paper Audit Trail (VVPAT) voting system
- **VVPR** – Voter Verifiable Paper Records
- **VVSG** – Voluntary Voting Systems Guidelines

## 1. Introduction

The Help America Vote Act of 2002 mandated the creation and make up of a fifteen person technical committee, chaired by the Director of NIST to recommend voluntary voting system guidelines to the Executive Director of the U.S. Election Assistance Commission. The Technical Guidelines Development Committee began its work in July 2004. At the first meeting of the TGDC and continuing for its five succeeding public plenary sessions, the Committee, operating as a Federal Advisory Committee, debated and adopted forty five resolutions to guide the technical work product of NIST staff. At the March 2006 TGDC plenary session, the TGDC unanimously adopted a forty sixth resolution:

### ***Resolution #01-06, Tracking NIST Work Product to TGDC Resolutions, Offered by: Mr. Craft***

*NIST shall prepare a brief report that tracks the resolutions passed by the TGDC with the progress of the standards' development and specific work products of NIST. After the initial publication, reports will be provided to the TGDC prior to each public meeting and will be included as an appendix to all NIST and TGDC work products sent to the Election Assistance Commission.*

The initial progress report was e-mailed to TGDC members in June 2006. The report included a brief overview and accompanying matrix that tied specific NIST tasks to corresponding resolutions passed by the TGDC over the two preceding years. From June 2006 through August 2007, NIST staff updated the matrix to reflect progress on particular tasks. The current document fulfills the final progress report due to the TGDC after the August 2007 plenary teleconference.

## **2. Overview**

NIST staff began tracking HAVA work product activities to the corresponding TGDC resolutions in January 2005. The TGDC received a high level matrix presentation at the March 2005 plenary session. The matrix dealt specifically with the tasks required to complete the initial recommendations for voluntary voting system guidelines due to the EAC in May 2005. The current matrix includes the disposition of tasks relative to both the 2005 VVSG and the VVSG NEXT [*formerly referenced as VVSG 2007*] delivered to the EAC in September 2007.

Approximately 25% of the resolutions are defined as structural. They apply to all three working subcommittees: HFP, STS, and CRT. Specifically, these resolutions, while on-going, simply provide a framework for the output of both the TGDC and NIST. As such, the structural resolutions will require little if any updating over the course of the development of guidelines by the TGDC. Their completion status will be on going until the final report is delivered with the VVSG document.

The remaining 75% of the resolutions in the matrix are tied to specific subcommittees, task status and priority issues. The final “preliminary report” resolutions for the next VVSG were presented, debated and approved at the December 2006 TGDC plenary session. The Committee reviewed and gave conditional approval to a complete draft VVSG document at the May 2007 TGDC meeting. At the August 2007 plenary, the Committee approved the final draft of the VVSG that resulted from recommended edits and restructuring guidance delivered to NIST at the May plenary session.

## **3. Resolution-Task Matrix**

The succeeding pages present a matrix of the final status of NIST work on VVSG tasks assigned by the TGDC.

This matrix will supplement a companion executive VVSG summary document along with a second requirements matrix that maps VVSG requirement recommendations to specific TGDC resolutions and where applicable, references to preceding VVSG 2005 resolutions.

Number	TGDC Resolution	Subcommittee	Disposition VVSG 2005	Disposition VVSG NEXT*	Task Status/NIST Lead	Priority issues
01-06	Create a tracking matrix of resolutions passed by the TGDC correlated with specific work products of NIST	Structural Resolution (All)	Initial High Level Matrix completed in January 2005 and presented at 3/05 TGDC Meeting. See: <a href="http://vote.nist.gov/Priority-Strategy%20TGDC%20Resolutions2.doc">http://vote.nist.gov/Priority-Strategy%20TGDC%20Resolutions2.doc</a>	Matrix to be completed and maintained with updated status on web site. TGDC to receive updated reports before each plenary.	<b>Completed</b> /Eustis	Complete VVSG NEXT due to EAC in September 2007 pending TGDC final approval in August 2007. (* <b>VVSG NEXT formerly referenced as VVSG 2007</b> )
01-04	Create 3 three working sub committees: Security & Transparency; Human Factors & Privacy; Core Requirements and Testing	Structural Resolution (All)	Subcommittees met via telcon and reviewed NIST preliminary documents and VVSG drafts. See: <a href="http://vote.nist.gov/subcommittee_xscripts2004.htm">http://vote.nist.gov/subcommittee_xscripts2004.htm</a>	Subcommittees met bi-weekly. Calendar available for updates at: <a href="http://vote.nist.gov/TGDC/telecons.html">http://vote.nist.gov/TGDC/telecons.html</a>	<b>Completed</b> / Eustis, Laskowski, Hastings, Goldfine	Action Items and priorities are noted in telcon meeting minutes. See: <a href="http://vote.nist.gov/TGDC/telecons.html">http://vote.nist.gov/TGDC/telecons.html</a>
02-04	Chair surveys TGDC and appoints Subcommittee Chairs	Structural Resolution (All)	Subcommittee chairs appointed. All TGDC members assigned to desired subcommittees. See: <a href="http://vote.nist.gov/subcommittee_work.htm">http://vote.nist.gov/subcommittee_work.htm</a>	No change in procedure for VVSG NEXT	<b>Completed</b> /Bement, Semerjian, Jeffrey	Open seats on TGDC filled officially 11/06. P. Miller represents NASED, Mason, Pearce represent U.S. Access Board. Wagner represents ANSI. Two current vacancies.
03-04	Resolutions adopted by TGDC shall be referred to NIST for technical assistance and editing. TGDC will conduct final review.	Structural Resolution (All)	NIST referred draft VVSG requirements for final review to TGDC at 4/05 plenary session. See: <a href="http://www.vote.nist.gov/VVSG1/VersionOne.htm">http://www.vote.nist.gov/VVSG1/VersionOne.htm</a>	Process of TGDC review continues for VVSG NEXT. All draft documents are available for review on TGDC internal web page: <a href="http://vote.nist.gov/TGDC/vvsg07.html">http://vote.nist.gov/TGDC/vvsg07.html</a>	<b>Completed Pending Approval</b> /Bement/Semerjian/ Jeffrey	Next VVSG recommendations will be delivered in September 2007 time frame upon approval by TGDC
04-04	Adopted resolutions and explanatory materials comprise first set of recommendations	Structural Resolution (All)	First set of recommendations submitted to EAC on 5/9/05. See: <a href="http://vote.nist.gov/TGDC/meeting0404.pdf">http://vote.nist.gov/TGDC/meeting0404.pdf</a>	No change in procedure for VVSG NEXT	<b>Completed</b> /Bement, Semerjian, Jeffrey	Initial VVSG Document Strategy for HAVA Priorities at: <a href="http://vote.nist.gov/TGDC/Priority-Strategy%20TGDC%20Resolutions.doc">http://vote.nist.gov/TGDC/Priority-Strategy%20TGDC%20Resolutions.doc</a>
05-04	Recommend to EAC that certified software be sent to NSRL	Structural Resolution (All)	Software has been submitted to NSRL and is publicly posted at: <a href="http://www.nsr.nist.gov/vote.html">http://www.nsr.nist.gov/vote.html</a>	NSRL remains open to vendor software submissions and will work with EAC to facilitate NSRL usage by election officials	<b>Ongoing</b> */Guttman	* NSRL will continue to accept vendor software after VVSG NEXT delivery to EAC
01-05	Work product Instructions to NIST staff re: development of initial VVSG requirements	Structural Resolution (All)	All work product to be considered by TGDC delivered to members NLT 5 working days before plenary meetings. See: <a href="http://vote.nist.gov/TGDC/TGDCmeeting032207.htm">http://vote.nist.gov/TGDC/TGDCmeeting032207.htm</a>	No change in procedure for VVSG NEXT	<b>Completed</b> /Eustis	All work product posted as updated to: <a href="http://vote.nist.gov/TGDC/vvsg07.html">http://vote.nist.gov/TGDC/vvsg07.html</a>
02-05	Accessible Voting Systems	Human Factors	Covered partially in VVSG2005: Section 3, pp 45-64	All relevant existing accessibility requirements incorporated. See: <a href="http://vote.nist.gov/TGDC/hfp/vvsg-hfp-SET-022407.pdf">http://vote.nist.gov/TGDC/hfp/vvsg-hfp-SET-022407.pdf</a>	<b>Completed</b> /Laskowski	NIST will continue research into usability and accessibility issues for future VVSG guidelines
03-05	Human Factors and Privacy of Voting Systems at the Polling Place	Human Factors (Lead) & Security	Covered partially in VVSG2005: Section 3, pp 45-64	Worked with Security Subcommittee on overlap in "privacy" issues. See: <a href="http://vote.nist.gov/TGDC/sts/SI-n-access-022607.doc">http://vote.nist.gov/TGDC/sts/SI-n-access-022607.doc</a>	<b>Completed</b> /Laskowski	Cross Cutting Issues discussed at March and May 2007 Plenaries
04-05	Human Factors and Privacy Requirements for Capturing Indication of a Voter's Choice	Human Factors	Covered partially in VVSG2005: Section 3, pp 45-64	Worked with Security Subcommittee on overlap in "privacy" issues. See: <a href="http://vote.nist.gov/TGDC/sts/SI-n-access-022607.doc">http://vote.nist.gov/TGDC/sts/SI-n-access-022607.doc</a>	<b>Completed</b> /Laskowski	Cross Cutting Issues discussed at March and May 2007 Plenaries
05-05	Human Performance-Based Standards and Usability Testing	Human Factors	Covered partially in VVSG2005: Section 3, pp 45-64	Overview of proposed metrics completed. See: <a href="http://vote.nist.gov/032906performance-metrics3-10-06.doc">http://vote.nist.gov/032906performance-metrics3-10-06.doc</a>	<b>Completed</b> /Laskowski	Research findings to be updated at August 2007 Plenary. HF Research to continue beyond delivery of VVSG NEXT to EAC

Number	TGDC Resolution	Subcommittee	Disposition VVSG 2005	Disposition VVSG NEXT	Task Status/NIST Lead	Priority issues
06-05	Accommodating a Wide Range of Human Abilities	Human Factors	Covered partially in VVSG2005:Section 3, pp 45-64	Usability policy issues to be referred to EAC. See <a href="http://vote.nist.gov/TGDC/hfp/alt-lang.htm">http://vote.nist.gov/TGDC/hfp/alt-lang.htm</a> , <a href="http://vote.nist.gov/TGDC/hfp/choice-n-warning.htm">http://vote.nist.gov/TGDC/hfp/choice-n-warning.htm</a> , & <a href="http://vote.nist.gov/TGDC/hfp/timing.htm">http://vote.nist.gov/TGDC/hfp/timing.htm</a>	<b>Completed</b> /Laskowski	See white paper at- <a href="http://vote.nist.gov/TGDC/hfp/alt-lang.htm">http://vote.nist.gov/TGDC/hfp/alt-lang.htm</a>
07-05	<i>Withdrawn</i>					
08-05	Guidance for Instructions, Ballot Design, and Error Messages	Human Factors	Issues initially addressed in HFP Report to Congress Section 6.6. See: <a href="http://www.vote.nist.gov/Final%20Human%20Factors%20Report%20%2005-04.pdf">http://www.vote.nist.gov/Final%20Human%20Factors%20Report%20%2005-04.pdf</a>	Addressed in draft VVSG NEXT HFP section. See: <a href="http://vote.nist.gov/TGDC/VVSG-Draft-07202007-Chapter3.doc">http://vote.nist.gov/TGDC/VVSG-Draft-07202007-Chapter3.doc</a>	<b>Completed</b> /Laskowski	See research paper at: <a href="http://www.vote.nist.gov/TGDC/hfp/Plain%20Language%20Report.pdf">http://www.vote.nist.gov/TGDC/hfp/Plain%20Language%20Report.pdf</a>
09-05	General Voting System Human Factors and Privacy Considerations	Human Factors	Covered partially in VVSG2005:Section 3, pp 45-64	Coordinated with Security Subcommittee on overlap in "privacy" issues. Cross cutting issue discussed at March 2007 plenary	<b>Completed</b> /Laskowski	See HFP/STS Research paper on SI and Accessibility: <a href="http://vote.nist.gov/TGDC/sts/SI-n-access031207.pdf">http://vote.nist.gov/TGDC/sts/SI-n-access031207.pdf</a>
10-05	Usability of Standard	All	Similar structure to 2002 VSS with additions of conformance clause, usability and additional security requirements. See VVSG 2005 Section 1.6.3 page 13	Addressed in VVSG NEXT structure, layout, language. See: <a href="http://vote.nist.gov/TGDC/format_rules.html">http://vote.nist.gov/TGDC/format_rules.html</a> and <a href="http://vote.nist.gov/TGDC/vvsg07-template.htm">http://vote.nist.gov/TGDC/vvsg07-template.htm</a>	<b>Completed</b> /Wack	See VVSG Draft, Introduction, Chapters 1,2,3, and 4; <a href="http://vote.nist.gov/TGDC/VVSG-Draft-07202007.doc">http://vote.nist.gov/TGDC/VVSG-Draft-07202007.doc</a>
11-05	Availability of Voting Machines for Validating Benchmarks and Conformance Test Protocols	Human Factors	NIST now has voting system lab; vendors replying to Federal Register notice. See: <a href="http://vote.nist.gov/AccredLABnotice.pdf">http://vote.nist.gov/AccredLABnotice.pdf</a>	NIST conducted initial benchmark research with voting equipment	<b>Ongoing</b> */ Laskowski, Eustis	Initial Recommendations on Usability Benchmark Research to be delivered at August 2007 plenary. (* <i>Benchmark research to continue beyond delivery of recommendations to EAC</i> )
12-05	Voter Verifiability I	Security	Addressed with VVPAT in VVSG2005. See Sections 7.8 and 7.9 pages 134, 137.	Addressed fully in VVSG NEXT. See: <a href="http://vote.nist.gov/TGDC/sts/vvp-at-update-20060317.pdf">http://vote.nist.gov/TGDC/sts/vvp-at-update-20060317.pdf</a>	<b>Completed</b> /Wack, Peralta	See Voting Class Structure, Conformance Clause Chap. 2, Section 2.5); <a href="http://vote.nist.gov/TGDC/crt/DWF-">http://vote.nist.gov/TGDC/crt/DWF-</a>
13-05	<i>Not Adopted</i>					
14-05	Commercial Off-The-Shelf Software ("COTS Software")	Security (lead) & Core Requirements	COTs software exclusion in VVSG 2005 I Section 5.2.3, p 94 Also I.5.1.1, I.7.1, II.4.2.1, II.4.6.1, and II.5.2	Addressed in VVSG2007 with voting system architectural & testing requirements. See: <a href="http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20060425/DWF-WorkingDraft-20060425.html">http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20060425/DWF-WorkingDraft-20060425.html</a>	<b>Completed</b> /Flater, Hastings	See COTS issue paper: <a href="http://vote.nist.gov/TGDC/crt/COTS-20061016/COTS-20061016.pdf">http://vote.nist.gov/TGDC/crt/COTS-20061016/COTS-20061016.pdf</a>
15-05	Software Distribution	Security	Covered partially in VVSG2005. See Section 7.4.4 p 119. Also see <a href="http://vote.nist.gov/TGDC/Software%20Distribution-02252005.doc">http://vote.nist.gov/TGDC/Software%20Distribution-02252005.doc</a>	Addressed fully in VVSG2007. See: <a href="http://vote.nist.gov/TGDC/sts/Setup-Validation-Approaches-02282007.doc">http://vote.nist.gov/TGDC/sts/Setup-Validation-Approaches-02282007.doc</a>	<b>Completed</b> /Hastings	See Software Identification Verification Requirements ( 1.2.1.1) <a href="http://vote.nist.gov/TGDC/VVSG-Draft-07202007-Chapter5.doc">http://vote.nist.gov/TGDC/VVSG-Draft-07202007-Chapter5.doc</a>
16-05	Setup Validation	Security	Covered partially in VVSG2005. See Section 7.4.3 p 119 and Section 7.4.6 p 123	Addressed fully in VVSG2007. See: <a href="http://vote.nist.gov/TGDC/Potential-impact-of-SI-on-setup-validation-requirements-012507.doc">http://vote.nist.gov/TGDC/Potential-impact-of-SI-on-setup-validation-requirements-012507.doc</a>	<b>Completed</b> /Hastings	See Set up Validation Requirements: <a href="http://vote.nist.gov/TGDC/sts/Draft-Setup-Validation-FORMATTED-02162007.pdf">http://vote.nist.gov/TGDC/sts/Draft-Setup-Validation-FORMATTED-02162007.pdf</a>
17-05	Testing (for security)	Security	See VVSG 2005 (Volume 2) , Sections 4 and 5	Test cases and requirements for open ended testing addressed in VVSG NEXT. See: <a href="http://vote.nist.gov/TGDC/sts/OEVT-DraftText-Volume5-062807.pdf">http://vote.nist.gov/TGDC/sts/OEVT-DraftText-Volume5-062807.pdf</a>	<b>Completed</b> /Hastings	See OEVT Concepts Paper: <a href="http://vote.nist.gov/TGDC/sts/OEVT%20workingdraft%20v3.doc">http://vote.nist.gov/TGDC/sts/OEVT%20workingdraft%20v3.doc</a>
18-05	Documentation (for security)	Security	See VVSG 2005, Sections 4.1.7, 4.1.8 and 5.4.	Addressed in requirements for technical data package and voting equipment user documentation. See <a href="http://vote.nist.gov/TGDC/sts/Volume-4.pdf">http://vote.nist.gov/TGDC/sts/Volume-4.pdf</a>	<b>Completed</b> /Hastings	See System Security Documentation Specs: <a href="http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070711/DWF-WorkingDraft-20070711.html#UDSecurity">http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070711/DWF-WorkingDraft-20070711.html#UDSecurity</a>

Number	TGDC Resolution	Subcommittee	Disposition VVSG 2005	Disposition VVSG NEXT	Task Status/NIST Lead	Priority issues
19-05	<i>Withdrawn</i>					
20-05	<i>Withdrawn</i>					
21-05	Multiple Representations of Ballots	Security	Covered partially in VVSG2005 in VVPAT and IDV. See: Sections 7.8 and 7.9 pages 134, 137.	Addressed fully in VVSG NEXT in IDV requirements. See: <a href="http://vote.nist.gov/TGDC/sts/VVPAT_Expansion-20060208-jpw.pdf">http://vote.nist.gov/TGDC/sts/VVPAT_Expansion-20060208-jpw.pdf</a>	<b>Completed</b> /Hastings, Wack, Peralta	See: <a href="http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070717/DWF-WorkingDraft-20070717.html#GeneralDesign">http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070717/DWF-WorkingDraft-20070717.html#GeneralDesign</a> , 2.5.3.1
22-05	Federal Standards	Security	Covered partially in VVSG2005 in use of USG crypto programs and existing industry standards. See VVSG 2005 Appendix B	Addressed fully in VVSG NEXT with inclusion of relevant material or citations to USG and other standards, e.g., FIPS 140, ANSI/RBAC, NIST E-authentication. See: <a href="http://vote.nist.gov/TGDC/sts/OEVT%20workingdraft%20v3.doc">http://vote.nist.gov/TGDC/sts/OEVT%20workingdraft%20v3.doc</a>	<b>Completed</b> /Hastings	See: <a href="http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070717/DWF-WorkingDraft-20070717.html#TDP_Appendix B">http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070717/DWF-WorkingDraft-20070717.html#TDP_Appendix B</a>
23-05	Common Ballot Format Specifications	Security	Addressed initially in VVSG2005 in VVPAT, See: Section 7.9 page 137 -141	Addressed more fully in VVSG NEXT with integratability requirements for election data. See: <a href="http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070717/DWF-WorkingDraft-20070717.html#Interop">http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070717/DWF-WorkingDraft-20070717.html#Interop</a>	<b>Ongoing</b> */Hastings, Flater	NIST reviewed OASIS publiv comments on draft requiremnts (* NIST will continue to work with OASIS/IEEE to ensure availability of information to meet standards after delivery of VVSG recommendations)
24-05	Conformance Clause	Core Requirements	Present in VVSG2005, See Section 1.6	Re-written for VVSG NEXT. See <a href="http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070711/DWF-WorkingDraft-20070711.html#ConformanceClause">http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070711/DWF-WorkingDraft-20070711.html#ConformanceClause</a>	<b>Completed</b> / Flater	
25-05	Precise and Testable Requirements	Structural Resolution (All)	Initially covered in VVSG 2005, Section 1.6.3. Also analysis of VSS 2202 at <a href="http://vote.nist.gov/TGDC/Disposition%20of%20Requirements%20from%202002%20VSS%20Vol%20I.doc">http://vote.nist.gov/TGDC/Disposition%20of%20Requirements%20from%202002%20VSS%20Vol%20I.doc</a> & <a href="http://vote.nist.gov/TGDC/Table%20of%20Disposition%20of%20Requirements%20from%20the%202002%20VSS%20Vol%20II.doc">http://vote.nist.gov/TGDC/Table%20of%20Disposition%20of%20Requirements%20from%20the%202002%20VSS%20Vol%20II.doc</a>	Addressed in VVSG NEXT through reorganization of standard, rewrite of requirements and revision of test methods.	<b>Completed</b> /Goldfine	See Test Plan requirements: <a href="http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070711/DWF-WorkingDraft-20070711.html#TestPlan">http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070711/DWF-WorkingDraft-20070711.html#TestPlan</a> and intro.to test methods: <a href="http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070711/DWF-WorkingDraft-20070711.html#IntroTestMethods">http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070711/DWF-WorkingDraft-20070711.html#IntroTestMethods</a>
26-05	Uniform Testing Methods and Procedures	Core Requirements	VVSG 2005 Test Methods in Volume II Sections 3-7	Revised test methods in VVSG NEXT, with bulk of test suite development occurring after delivery of VVSG NEXT	<b>Ongoing</b> */Flater, Rosenthal	(*NIST will continue work on VVSG test suite development after delivery of VVSG NEXT recommendations)
27-05	Non-Conformant Voting Systems	Core Requirements	Analysis of VSS 2002 done. See: <a href="http://vote.nist.gov/TGDC/Analysis%20of%20the%202002%20VSS%20Final%20Draft.doc">http://vote.nist.gov/TGDC/Analysis%20of%20the%202002%20VSS%20Final%20Draft.doc</a>	Moot; text in question deleted and sections rewritten in VVSG NEXT	<b>Completed</b> /Goldfine, Flater	
28-05	Publicly Available Qualification Data	Core Requirements	No publicly available data package defined in VVSG 2005	Addressed in VVSG NEXT and in NVLAP work in certifying VSTLs. See: <a href="http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070717/DWF-WorkingDraft-20070717.html#PIP">http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070717/DWF-WorkingDraft-20070717.html#PIP</a>	<b>Completed</b> / Flater	
29-05	Ensuring Correctness of Software Code	Core Requirements	Initially in VVSG 2005 Vol 1- Software Integrity Section 5.2.2 and Vol 2 Secion 5Software testing	Addressed in VVSG NEXT by revised coding standards, TDP requirements and logic verification test method. See: <a href="http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070717/DWF-WorkingDraft-20070717.html#SourceCodeReview">http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070717/DWF-WorkingDraft-20070717.html#SourceCodeReview</a>	<b>Completed</b> / Flater	Also see logic verification requiremnts: <a href="http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070711/DWF-WorkingDraft-20070711.html#LogicVerification">http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070711/DWF-WorkingDraft-20070711.html#LogicVerification</a>

Number	TGDC Resolution	Subcommittee	Disposition VVSG 2005	Disposition VVSG NEXT	Task Status/NIST Lead	Priority issues
30-05	Quality Management Standards	Core Requirements	Initially in VVSG 2005 Vol 1 Section 8 & Volume 2 Section 7	Addressed in VVSG NEXT. See: <a href="http://vote.nist.gov/TGDC/crt/AG-WorkingDraft-20060317/AG-WorkingDraft-20060317.pdf">http://vote.nist.gov/TGDC/crt/AG-WorkingDraft-20060317/AG-WorkingDraft-20060317.pdf</a>	<b>Completed</b> /Goldfine	QM/QA paper discussed and resolved at March 2007 Plenary See: <a href="http://vote.nist.gov/TGDC/crt/QA-CM-white-paper-for-CRT-r3.pdf">http://vote.nist.gov/TGDC/crt/QA-CM-white-paper-for-CRT-r3.pdf</a>
31-05	Maintenance of the VSS	Core Requirements	Issues paper has been produced and circulated to TGDC. See: <a href="http://vote.nist.gov/TGDC/Maintenance%20of%20the%20VVSG%20Draft%203.doc">http://vote.nist.gov/TGDC/Maintenance%20of%20the%20VVSG%20Draft%203.doc</a>	Issues Paper applies. Relevant HAVA policy issues to be referred to EAC	<b>Completed</b> /Goldfine	See EAC Certification/Decertification Program: <a href="http://www.eac.gov/eac_vsc2.htm">http://www.eac.gov/eac_vsc2.htm</a>
32-05	Sharing Information and De-qualification of Voting Systems	Core Requirements	Complete; issues paper has been produced; See: <a href="http://vote.nist.gov/TGDC/sharing_cert_info20050606.doc">http://vote.nist.gov/TGDC/sharing_cert_info20050606.doc</a>	Issues Paper applies. Relevant HAVA policy issues to be referred to EAC	<b>Completed</b> /Goldfine	
33-05	Glossary and Voting Model	Core Requirements	Addressed in VVSG2005 Appendix A	Updated in VVSG NEXT as needed	<b>Completed</b> /Flater, Rosenthal	Input from TGDC and EAC incorporated
34-05	Assessment Papers on Recommendations for Future work	Core Requirements	Addressed in initial issues papers See: <a href="http://vote.nist.gov/TGDC/assessment-gap.doc">http://vote.nist.gov/TGDC/assessment-gap.doc</a>	Contracts to explore future HFP and test case issues under process at NIST	<b>Ongoing</b> /Guttman, Laskowski, Goldfine	(*Research will continue beyond delivery of VVSG NEXT recommendations)
35-05	Wireless	Security	Covered initially in VVSG2005. See Volume 1 Section 6	Covered in general security requirements. Also see resolution 04-06. Draft EMC requirements at: <a href="http://vote.nist.gov/TGDC/crt/EMC-Draft3-with-outline-for-CRT.pdf">http://vote.nist.gov/TGDC/crt/EMC-Draft3-with-outline-for-CRT.pdf</a>	<b>Completed</b> /Hastings, Goldfine	Extending wireless requirements to e-poll books discussed at May 2007 plenary
36-05	Consensus Standards	Structural Resolution (All)	Consensus Standards referenced in VVSG 2005. See Volume 1 Appendix B	Consensus Standards in VVSG NEXT. See: <a href="http://vote.nist.gov/TGDC/crt/AG-WorkingDraft-20060317/AG-WorkingDraft-20060317.html">http://vote.nist.gov/TGDC/crt/AG-WorkingDraft-20060317/AG-WorkingDraft-20060317.html</a>	<b>Completed</b> /Goldfine, Flater	See VVSG Standards References: <a href="http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070711/DWF-WorkingDraft-20070711.html#Bibliography">http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070711/DWF-WorkingDraft-20070711.html#Bibliography</a>
37-05	Work Product Instructions to Chair and Staff of (NIST)	Structural Resolution (All)	Instructions followed in completion of initial recommendations. See: <a href="http://vote.nist.gov/TGDC/memo.pdf">http://vote.nist.gov/TGDC/memo.pdf</a>	Process continued for VVSG NEXT. Subcommittee VVSG approval resolutions to be presented at August Plenary	<b>Completed Pending Approval</b> /Eustis	Next VVSG to be delivered in September 2007 time frame. At EAC request, NIST will provide technical input to public comments
38-05	Procedural Resolution Regarding "Grandfathering"	Structural Resolution (All)	Policy Issue for EAC	Policy issue for EAC	<b>No NIST Action</b>	
39-05	Voter Verified Paper Audit Trail Assignment	Security	VVPAT requirements in 2005 VVSG Section 7.9	Proposed expansion of VVPAT requirements. See: <a href="http://vote.nist.gov/TGDC/sts/vvpate-update-20060317.pdf">http://vote.nist.gov/TGDC/sts/vvpate-update-20060317.pdf</a>	<b>Completed</b> /Wack	Final issues resolved at May 2007 plenary
40-05	EAC Consideration of Initial Recommendations	Structural Resolution (All)	Initial TGDC Recommendations delivered May 2005. EAC hosted a public comments page	NIST reviewed and commented on public comments at request of EAC. Deferred comments considered for VVSG NEXT. See: <a href="http://vote.nist.gov/TGDC/CommentsCarriedOver.doc">http://vote.nist.gov/TGDC/CommentsCarriedOver.doc</a>	<b>Ongoing</b> /Hastings, Goldfine, Laskowski	Next VVSG to be delivered in September 2007 time frame. At EAC request, (*NIST will provide technical input to public comments to VVSG NEXT)
02-06	Not Adopted					
03-06	The Innovation Class in VVSG NEXT	Security (lead) & HFP, CRT	Not Applicable	Cross cutting issue paper discussed at March 2007 Plenary	<b>Completed</b> /Wack	see: <a href="http://vote.nist.gov/TGDC/sts/SI-n-access-022607.pdf">http://vote.nist.gov/TGDC/sts/SI-n-access-022607.pdf</a>
04-06	Wireless Security	Security	Ammendment to Resolution 35-05	Incorporated in Draft VVSG NEXT Standard	<b>Completed</b> /Wack	Final issues resolved at May 2007 plenary
05-06	Withdrawn					
06-06	Software Independence of Voting Systems	Security & Human Factors	Not Applicable	Cross cutting issue paper discussed at March 2007 Plenary	<b>Completed</b> /Wack	See: <a href="http://vote.nist.gov/TGDC/sts/SI-n-access-031207.pdf">http://vote.nist.gov/TGDC/sts/SI-n-access-031207.pdf</a>
07-06	Withdrawn					

Number	TGDC Resolution	Subcommittee	Disposition VVSG 2005	Disposition VVSG NEXT	Task Status/NIST Lead	Priority issues
08-06	Recommendation to Interagency Committee on Disability Research (ICDR)	Human Factors	Not Applicable	Not Applicable	<b>Completed</b> /Laskowski	Promoting further federal research in disability issues related to voting systems
09-06	Principal Criteria	Core Requirements	Not Applicable	Statement included in VVSG NEXT. See: <a href="http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070717/DWF-WorkingDraft-20070717.html#ProdStdIntro">http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070717/DWF-WorkingDraft-20070717.html#ProdStdIntro</a>	<b>Completed</b> / Flater	Technical Data Package discussed at March and May 2007 Plenaries: See: <a href="http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070717/DWF-WorkingDraft-20070717.html#TDP">http://vote.nist.gov/TGDC/crt/DWF-WorkingDraft-20070717/DWF-WorkingDraft-20070717.html#TDP</a>
10-06	Reliability Metrics	Core Requirements	Not Applicable	Proposed Volume test metrics reviewed at May 2007 TGDC meeting	<b>Completed</b> / Flater	Cross cutting issue discussed at March 2007 Plenary see: <a href="http://vote.nist.gov/TGDC/crt/benchmarking-20070104/benchmarking.html">http://vote.nist.gov/TGDC/crt/benchmarking-20070104/benchmarking.html</a>
01-07	Accessibility of Paper-based Voter Verification Requirement	Security & Human Factors	Not Applicable	Covered in Innovation Class Requirements. See: <a href="http://vote.nist.gov/TGDC/sts/The-Innovation-Class.doc">http://vote.nist.gov/TGDC/sts/The-Innovation-Class.doc</a>	<b>Completed</b> /Hastings & Laskowski	Remaining Issues resolved at May 2007 Plenary
02-07	Improving Paper Records	Security & Human Factors	Not Applicable	Covered in Innovation Class Requirements. See: <a href="http://vote.nist.gov/TGDC/sts/The-Innovation-Class.doc">http://vote.nist.gov/TGDC/sts/The-Innovation-Class.doc</a>	<b>Completed</b> /Hastings & Laskowski	Remaining Issues resolved at May 2007 Plenary
03-07	Draft VVSG Chapters: Human Factors & Privacy Subcommittee Sections for next VVSG-Preliminary and Conditional Approval	Human Factors	Not Applicable	Adopted by Unanimous Consent. For matrix matching relevant VVSG Chapters and Subcommittee responsibility see: <a href="http://vote.nist.gov/meeting-05212007/chapter-status-052107.pdf">http://vote.nist.gov/meeting-05212007/chapter-status-052107.pdf</a>	<b>Completed</b> /Laskowski	Responds to TGDC Resolutions 2-05, 3-05, 4-05, 5-05, 6-05, 8-05, 9-05, 10-05, 11-05, 36-05, 01-07 and 02-07
04-07	Draft VVSG Chapters: Core Requirements and Testing Subcommittee Sections for next VVSG-Preliminary and Conditional Approval	Core Requirements	Not Applicable	Adopted by Unanimous Consent. For matrix matching relevant VVSG Chapters and Subcommittee responsibility see: <a href="http://vote.nist.gov/meeting-05212007/chapter-status-052107.pdf">http://vote.nist.gov/meeting-05212007/chapter-status-052107.pdf</a>	<b>Completed</b> /Flater, Goldfine	Responds to TGDC Resolutions 24-05, 25-05, 27-05, 29-05, 31-05, 32-05, 36-05, 09-06 and 10-06
05-07	Draft VVSG Chapters: Security and Transparency Subcommittee Sections for next VVSG-Preliminary and Conditional Approval	Security	Not Applicable	Adopted by Unanimous Consent. For matrix matching relevant VVSG Chapters and Subcommittee responsibility see: <a href="http://vote.nist.gov/meeting-05212007/chapter-status-052107.pdf">http://vote.nist.gov/meeting-05212007/chapter-status-052107.pdf</a>	<b>Completed</b> /Hastings, Wack	Responds to TGDC Resolutions 12-05, 14-05, 15-05, 16-05, 17-05, 18-05, 21-05, 22-05, 23-05, 35-05, 36-05, 39-05, 03-06, 04-06, 06-06, 01-07, and 02-07
06-07	Security and Transparency Sections of the VVSG Recommendations to the EAC: Final Approval	Security	Not Applicable	Adopted. Inclusive of: <ul style="list-style-type: none"> <li>•Part 1 <ul style="list-style-type: none"> <li>–Chapter 2 Section 2.7</li> <li>–Chapters 4-5 All</li> <li>–Chapter 6 Section 6.6</li> <li>–Chapter 7 Section 7.5.1</li> </ul> </li> <li>•Part 2 <ul style="list-style-type: none"> <li>–Chapter 3 Section 3.5</li> <li>–Chapter 4 Section 4.3</li> </ul> </li> <li>•Part 3 <ul style="list-style-type: none"> <li>–Chapter 3 Section 3.4</li> <li>–Chapter 4 Section 5.4</li> </ul> </li> </ul>	<b>Completed</b> /Hastings, Wack	See Requirements Matrices at: <a href="http://vote.nist.gov/VVSG-0807/RequirementsFullMatrix.pdf">http://vote.nist.gov/VVSG-0807/RequirementsFullMatrix.pdf</a> , <a href="http://vote.nist.gov/VVSG-0807/TGDCMatrixTasks.pdf">http://vote.nist.gov/VVSG-0807/TGDCMatrixTasks.pdf</a> , <a href="http://vote.nist.gov/VVSG-0807/TGDCMatrixTasks-b3.pdf">http://vote.nist.gov/VVSG-0807/TGDCMatrixTasks-b3.pdf</a>

07-07	Core Requirements and Testing Sections of the VVSG Rercommendations to the EAC: Final Approval	Core Requirements	Not Applicable	Adopted. Inclusive of: •Part 1 –Chapters 1 and 8 All –Chapter 2 All except Section 2.7 –Chapter 6 All except Section 6.6 –Chapter 7 All except Section 7.5.1 •Part 2 –All except Chapter 3 Section 3.5 and Chapter 4 Section 4.3 •Part 3 –All except Sections 3.4 and 5.4	<u>Completed</u> /Flater, Goldfine	See Requirements Matrices at: <a href="http://vote.nist.gov/VVSG-0807/RequirementsFullMatrix.pdf">http://vote.nist.gov/VVSG-0807/RequirementsFullMatrix.pdf</a> <a href="http://vote.nist.gov/VVSG-0807/TGDCMatrixTasks.pdf">http://vote.nist.gov/VVSG-0807/TGDCMatrixTasks.pdf</a> <a href="http://vote.nist.gov/VVSG-0807/TGDCMatrixTasks-b3.pdf">http://vote.nist.gov/VVSG-0807/TGDCMatrixTasks-b3.pdf</a>
<b>Number</b>	<b>TGDC Resolution</b>	<b>Subcommittee</b>	<b>Disposition VVSG 2005</b>	<b>Disposition VVSG NEXT</b>	<b>Task Status/NIST Lead</b>	<b>Priority issues</b>
08-07	Human Factors and Privacy Sections of the VVSG Rercommendations to the EAC: Final Approval	Human Factors	Not Applicable	Adopted. Inclusive of: •Part 1, –Chapter 3 All •Part 3, –Chapter 4, Section 4.5	<u>Completed</u> /Laskowski	See Requirements Matrices at: <a href="http://vote.nist.gov/VVSG-0807/RequirementsFullMatrix.pdf">http://vote.nist.gov/VVSG-0807/RequirementsFullMatrix.pdf</a> <a href="http://vote.nist.gov/VVSG-0807/TGDCMatrixTasks.pdf">http://vote.nist.gov/VVSG-0807/TGDCMatrixTasks.pdf</a> <a href="http://vote.nist.gov/VVSG-0807/TGDCMatrixTasks-b3.pdf">http://vote.nist.gov/VVSG-0807/TGDCMatrixTasks-b3.pdf</a>
09-07	VVSG Document: Final Approval	All	Not Applicable	Adopted Unanimously	<u>Completed</u> /Wack, Laskowski, Goldfine, Flater, Hastings	Final Version delivered to EAC: <a href="http://vote.nist.gov/vvsg-report.htm">http://vote.nist.gov/vvsg-report.htm</a>
10-07	TGDC Encouragement of Innovation	All	Not Applicable	EAC Policy Decision	<u>Ongoing</u>	NIST to offer technical guidance on Innovation Class Program and Procedures
11-07	Recognition of TGDC Chair and NIST Staff	All	Not Applicable	No Action Required	<u>Completed</u> /All	