An Overview of VVSG Version 2

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What is VVSG Version 2?

- The next generation of voting system standards
- More comprehensive Security requirements
- More comprehensive Human Factors requirements
- More precise and testable Core Requirements
New Organization

• Principles
• Voting Process Model
• New structure for requirements
Principles

• Discussed in March 9, 2005 plenary
• Lay out fundamental principles for voting in US
Voting Process

• VSS-2002 defined three major stages of voting:
  – Pre-voting
  – Voting
  – Post-voting

• VVSG Version 2 will contain a much more detailed process model
Structure of Requirements

• VVSG Version 2 will contain a more structured approach
• Each requirement will be numbered according to a hierarchical scheme
  – Higher level requirements are supported by lower level requirements
  – Higher level requirements may not be directly testable but can be “indirectly” tested via their lower level requirements
Build on Group 2 and Group 3 Resolutions

• January 2005 resolutions were prioritized into 3 groups
• Groups 2 & 3 were not included in VVSG Version 1
Group 2

• Analysis of 2002 VSS
  – *Resolutions: 25-05, 29-05*

• Analysis of voter verifiability
  – *Resolution: 12-05*

• Additional requirements and test methods for human factors and accessibility
  – *Resolutions: 2-05, 3-05, 4-05, 5-05, 6-05, 8-05, 9-05*

• Test strategies and analysis, addressing COTS software, documentation requirements, non-conformant voting systems, and publicly available test suites and test reports
  – *Resolutions: 14-05, 17-05, 18-05, 25-05, 26-05, 27-05, 28-05*

• Strategy for addressing multiple representation of ballots
  – *Resolution: 21-05*

• Analysis of federal and consensus standards for applicability to voting
  – *Resolution: 22-05*

• Draft of next version of the VSS
  – *Resolutions: 24-05, 25-05, 29-05, 33-05*
Group 3

- Usability of the Standards
  - Resolution: 10-05
- Common ballot format specifications
  - Resolution: 23-05
- Quality management standards
  - Resolution: 30-05
- Maintenance of the VSS
  - Resolution: 31-05
- Sharing information and de-qualification of voting systems
  - Resolution: 32-05
- Assessment papers on recommendation for future work
  - Resolution: 34-05
Security

• VVSG version 2 will require independent verification
• Security testing
• Incorporate federal and voluntary consensus standards

• Resolutions: 12-05, 14-05, 17-05, 18-05, 21-05, 22-05
Human Factors

• Move to performance standards

• Better address security and accessibility to ensure that all relevant aspects of a system are accessible.

• Resolutions: 2-05, 3-05, 4-05, 5-05, 6-05, 8-05, 9-05
Core Requirements

- Make requirements more precise and testable
- Standards architecture
- Profiles
- Logic verification
- Coding standards
- Abstract test suite

• Resolutions: 14-05, 17-05, 18-05, 25-05, 26-05, 27-05, 28-05, 29-05
Analysis of VSS-2002

• Review VSS-2002 to determine:
  – parts to retain or recast into VVSG
  – parts needing substantial change
  – missing parts (gap analysis)

• Tables on disposition of each VSS requirement (VVSG Version 2 Appendix)

• Requirements mapped to principles

• Resolution: 25-05
Next Steps on VVSG Version 2

- Partial first draft to show approach
- Get feedback from TGDC and from election community on work so far
- Develop additional material
- Develop testing strategies