P1583
IEEE Voting System Standard

What Is It?

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Scope of Standard

• Includes polling place equipment used by voters
  – Paper type ballot tabulators
  – DRE voting units
  – Ancillary equipment at polling place for use with target equipment
  – Firmware/software used in target equipment

• Evaluation Standard
Scope of Standard (Continued)

• Excludes
  – Central site ballot tabulators
  – Front end software for ballot preparation
  – Front end hardware/software for programming memory devices used with target equipment
  – Back end hardware/software for results accumulation and reporting
  – Host or regional site communications hardware/software
Requirements Addressed

- Security & Confidentiality
- Reliability & Accuracy
- Usability & Accessibility
- Environmental
- Electromagnetic Compatibility
- Software & Functionality
Encompassed Election Processes

• Pre-Election Preparation
  – Loading election definition
  – Logic & Accuracy testing
  – Transport of equipment to polling place

• Election Day
  – Opening of polls
  – Voting process
  – Closing polls
  – Getting results

• Post Election
  – Collection of equipment
  – Storing equipment
Evolution of the Standard

- First committee meeting September 2001
- Task Groups formed by technical section with subject matter experts appointed as leaders
- Technical sections extracted from FEC 2002 (Requirements/Testing)
- Task Group members enhanced sections
- Sections put out for interest group balloting
- Comments resolved and section updated until balloting passed
- Full document created from approved sections
- Full document put out for committee balloting
- Ballot failed and over 1000 comments received
Vendor Perspective on VSS and Certification Testing
Benefits of Voting System Standards

- Standards necessary to establish baseline requirements/testing
- Sets requirements for new development
- ITA process assures all vendors equally treated
- Promotes vendor viability for long term support
- Assures adequate documentation for continued support without vendor
Areas of Concern and Decision Impact

- New system versus upgrade
- Tabulator versus supporting software
- Equipment choice – Custom versus COTS
- Software choice – Custom versus COTS
- Ability to rapidly deploy upgrades for bug corrections & usability enhancements
- Standards changes should be evolutionary not revolutionary
Enhanced Requirements Impact Cost/Benefit/Risk Tradeoffs

• Development
  – Time & dollars spent to implement
  – Risk of breaking working system
• Equipment – Additional cost vs benefit/risk
• Testing – Additional cost/time vs benefit/risk
• Usage – Additional complexity impacting training, testing, operation