Update on the NIST/TGDC Process

Briefing for the EAC Public Meeting

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NIST "Help America Vote Act" Responsibilities

- Chair Technical Guidelines Development Committee (TGDC)

- Provide technical support to TGDC in the development of voluntary voting system guidelines including:

  – Security

  – Methods to detect and prevent fraud

  – Human factors, including technologies for individuals with disabilities

NIST/TGDC Activities

- July 2004: Chaired 1st plenary session of TGDC - adopted work plan

- September 2004: Conducted TGDC public hearings to gather data and information on human factors, privacy, computer security, transparency, core requirements and testing of voting systems

- October 2004: Posted voting software "hashes" for use by state and local election officials at National Software Reference Library Web Site:

  http://www.nsrl.nist.gov/votedata.html

- October-December 2004: Conducted 17 TGDC Subcommittee teleconferences

NIST/TGDC Activities

- January 2005: Held second plenary session of TGDC, adopted 31 resolutions defining NIST technical guidance tasks

- February-March 2005: Complete technical guidance for most critical tasks in TGDC resolutions to affect voluntary voting system guidelines for the 2006 Election Cycle

- March, 2005: Held third plenary session of TGDC, provided feedback and endorsement of NIST draft work products, adopted one resolution

- April 2005: Initial TGDC recommendations for voting system guidelines forwarded to EAC

- August 2005: Complete second round of technical guidance tasks in TGDC resolutions

- November 2005: Complete third round of technical guidance tasks in TGDC resolutions

NIST/TGDC Committee Structure & Coordination

- TGDC resolution *(July '04)* established 3 subcommittees to gather and analyze information:
  - Security and Transparency
  - Human Factors and Privacy
  - Core Requirements and Testing
- Subcommittees meet at least every two weeks via teleconference
  - NIST voting team staff participates in teleconferences
  - Public provided access to teleconferences via the Internet
- NIST and subcommittee members conduct occasional face to face meetings
- Research and coordination done in-between subcommittee meetings
- Results of sub-committee research presented at TGDC plenaries

Resolutions and NIST Work Products

- TGDC plenaries are held to discuss issues, review work products and achieve consensus

- Resolutions adopted at TGDC Plenary Sessions by consensus

- Thirty-one resolutions adopted at January TGDC Plenary requesting NIST to conduct research and draft standards

- At March TGDC Meeting, NIST provided 22 separate draft work products that responded to resolutions

- One additional resolution adopted at March TGDC Plenary

- Initial recommendations for voluntary voting system guidelines will be produced for the April 2005 TGDC meeting.

Developing an Implementation Strategy

- First goal is to develop the best long-term guideline possible
  - Building on the strengths of the 2002 VSS
  - Changing areas that needed improvement
  - Reorganizing the requirements
- Second goal is to provide guidance to states in time for the 2006 election cycle
  - Implies need to minimize changes to 2002 VSS
  - While also filling in 2002 VSS gaps
- Thus, two guidelines will be developed
  - An augmented 2002 VSS
  - A new redesigned voting system guideline

The Augmented 2002 VSS

- Improves the 2002 VSS by filling in gaps (accessibility and usability, VVPAT, wireless, and others)

- Correcting errors in the 2002 VSS

- Issues facing the states (e.g., helping to ensure that installed voting system software is the software that has been tested)

Need To Prioritize

- TGDC passed 31 resolutions at January plenary

- Resolutions requested NIST's technical assistance

- In order to be responsive to voting community, resolutions need to be prioritized

Grouping the Priorities

- Group 1
  - Work targets the highest priority resolutions
  - Work augments and corrects the 2002 VSS
  - Guidance and requirements in April

- Group 2
  - Work targets the second highest priority resolutions
  - Work develops a new guideline
  - Builds upon the 2002 VSS but enhances security, human factors and the precision and testability of requirements
  - Initial work products in April
  - Plans for completion in November

- Group 3
  - Work targets the remainder of the resolutions
  - They will be addressed after April
  - Plans for completion in November

Group 1

- **Requirements for VVPAT, including DREs with attached printers**
  - *Resolution: 12-05 and TGDC/EAC requests*
- **Accessibility and usability requirements based on current technology**
  - *Resolutions: 2-05, 3-05, 4-05, 9-05*
- **Software distribution and setup validation procedures, including use of the NSRL**
  - *Resolutions: 15-05, 16-05*
- **Use of wireless technology**
  - *Resolution: 35-05*
- **Interim conformance clause**
  - *Resolution: 24-05*
- **Revised glossary**
  - *Resolution: 33-05*

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*

NIST Progress In Development of Work Products

- For consideration at the March 9 TGDC Plenary, NIST submitted 22 separate preliminary reports

- Feedback from March plenary was that NIST should continue to develop technical support and related work product consistent with these preliminary reports

- NIST continues to be on target to produce the initial set of recommendations for the April TGDC meeting

- Initial set of recommendations will consist of the completed augmented 2002 VSS and will be called the Voluntary Voting System Guidelines, Version 1