

**TECHNICAL GUIDELINES
DEVELOPMENT COMMITTEE (TGDC)**

STATUS UPDATE

TGDC Pre-Meeting

July 20 -21, 2015

NIST Facility - Gaithersburg, Maryland

Members :

Designated Federal Official

- Matthew V. Masterson, EAC Commissioner,

Chair

- Dr. Willie E. May, Director, NIST

EAC Standards Board Representatives

- Robert Giles
- Greg Riddlemoser

EAC Board of Advisors Representatives

- Linda Lamone
- Helen Purcell

Architectural and Transportation Barrier Compliance Board (Access Board) Representatives

- Marc Guthrie
- Mat McCollough

American National Standards Institute (ANSI) Representatives

- Scott Cooper

Institute of Electrical and Electronics Engineers (IEEE) Representative

- Jeremy Epstein

National Association of State Election Directors (NASED) Representatives

- Lori Augino
- Ross Hein

Technical Experts

- McDermot Coutts
- Diane Golden
- Jeramy Gray
- David Wagner

Public Working Groups

- Pre-Election
- Election Day
- Post Election
- Constituency Groups
 - Cybersecurity
 - Human Factors
 - Interoperability
 - Testing

Public Working Group Progress

- Created TWiki pages

Opening Polls on Early Voting Days and Election Day

- Please only edit or add content to those categories or subcategories highlighted in RED.
- If a category or subcategory is missing, please add it to the appropriate section on this page. Any categories or subcategories added to this page must also be added to the [Category Sign Up Sheet](#) in the corresponding location to allow for someone to sign up to help monitor and organize that new category or subcategory.

Locate Voting Equipment

For Sussex County, NJ - see page 3 of [SCNJ Pollworker Handbook](#)

For Mercer County, NJ - check [Table of Contents.docx](#) in Boardworker Reference Binder then go to page 24 [OPEN_CLOSE.doc](#)

Verify the Correct Voting Equipment was Delivered **Optical/Digital Scanner**

DRE/Touchscreen

For Sussex County, NJ - see page 3 of [SCNJ Pollworker Handbook](#)

For Mercer County, NJ - check [Table of Contents.docx](#) in Boardworker Reference Binder then go to page 24 [OPEN_CLOSE.doc](#)

Verify Ballot is Correct

Optical/Digital Scanner

(Insert text here)

DRE/Touchscreen

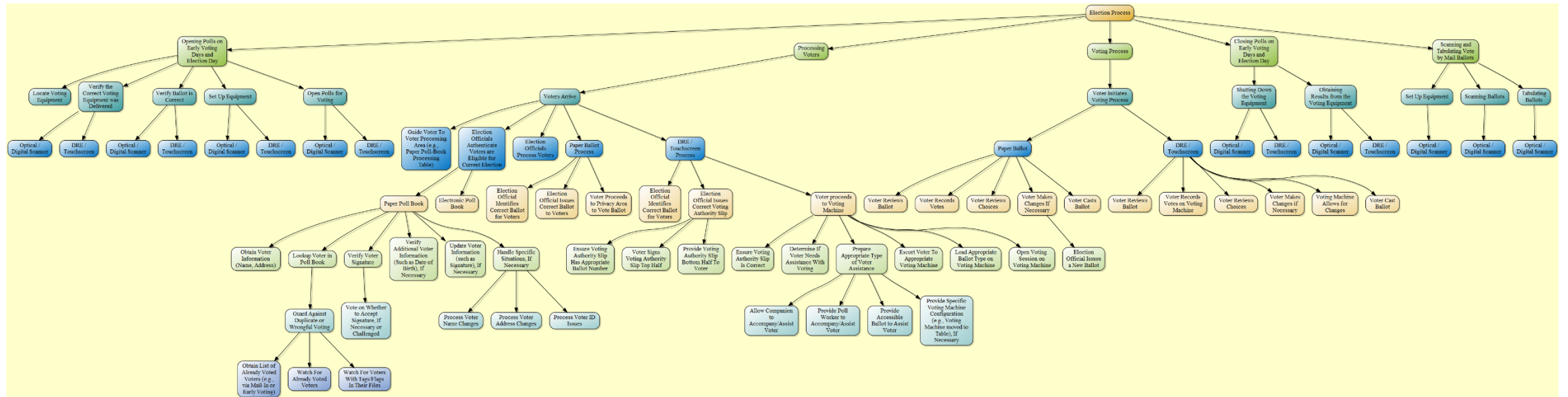
For Sussex County, NJ - see [SCNJ PW Pink Sheet](#) and page 17 of the [SCNJ Pollworker handbook](#).

For Mercer County, NJ - check [Table of Contents.docx](#) in Boardworker Reference Binder then go to page 24 [OPEN_CLOSE.doc](#)

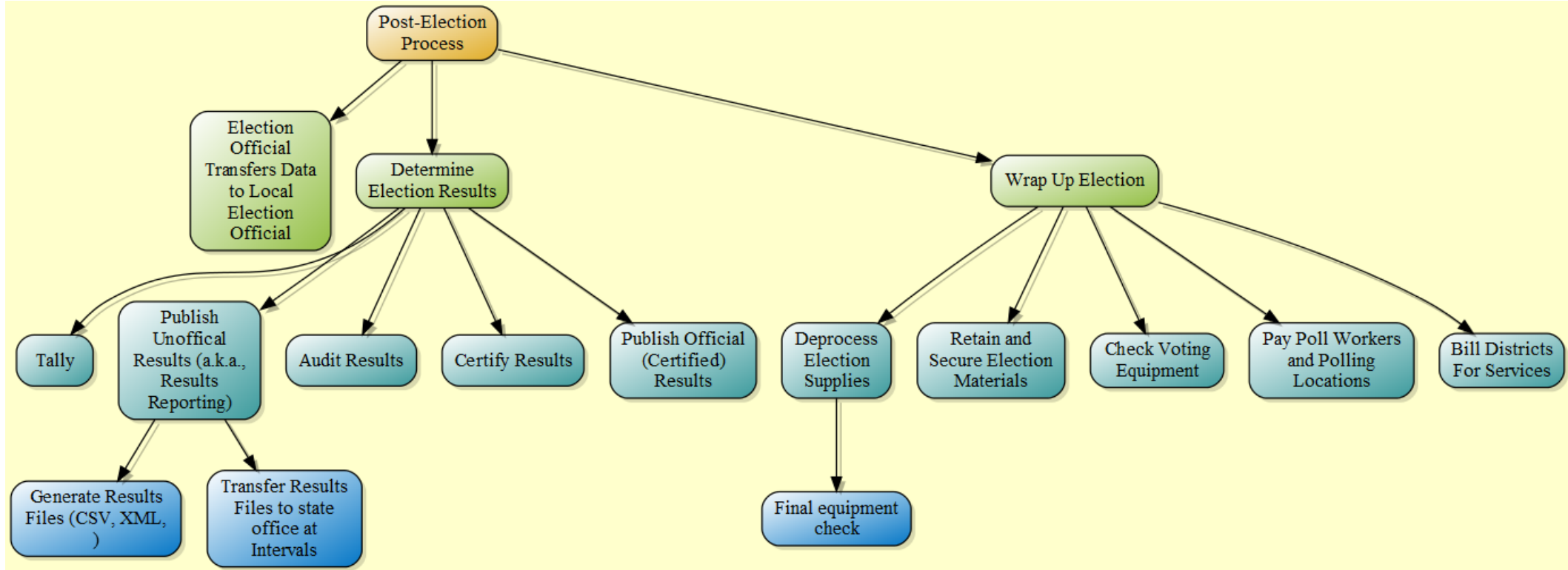
Set Up Equipment

Optical/Digital Scanner

Process Models – Election Day



Process Models – Post Election



TGDC First Official Meeting

February 8 – 9, 2016

U.S. Access Board - Washington, DC

Agenda:

- Presented Process Models
- Heard from the Constituency Groups
- Learned about legislative trends related to voting technology
- Discussed certification and standard setting strategies and recommendations
- Updated on the state to federal mapping project by the EAC
- Reviewed the proposed VVSG format
- Discussed Scope

Next Generation VVSG

- Principles/Guidelines
- Standards/Requirements
- Test Assertions

- Information in languages they understand
 - Delivered so it may be understood through hearing, vision, and touch, where appropriate.
- b. Present all relevant contest and choice information to voters:
- Consistently
 - Without bias
- c. Always be able to provide voters with:
- Help in using the system as it was designed to be used
 - Warnings and messages that encourage voter understanding and appropriate voter responses
 - Notification of important conditions, such as time-sensitive conditions
 - Clear navigation through the ballot to ensure they do not miss important information and make progress to completion of the ballot
- [313](#) | [314a](#) | [314bi](#) | [314bii](#) | [314ci](#) | [314cii](#) | [314d](#) | [315d](#) | [315e](#) | [315f](#) | [315g](#) | [315h](#) | [315i](#) | [316a](#) | [316c](#) | [3221b](#) | [3221c](#) | [3221d](#) | [3221e](#) | [3222cv](#) | [3222cvii](#) | [3222cviii](#) | [3222cix](#) | [3222f](#) | [3222g](#) |
3. **Voter Interaction:** A voter must be able to independently mark and cast their ballot as intended, regardless of their abilities.
- Provide voters with means by which they can make choices and navigate the system with minimal risk of error, ensuring that:
 - All ballot changes are initiated intentionally by the voter
 - Voters are provided feedback showing the results of their actions
 - Enable the voter to:
 - Adjust interface settings so as to maximize the quality of their interaction
 - Reset adjustable settings to default values
- [315c](#) | [316b](#) | [316di](#) | [316dii](#) | [3221d](#) | [3222cvi](#) | [3222cix](#) |
4. **Voter Protection:** A voter and their vote must be protected during the entire voting process, including protection from physical discomfort, physical harm, loss of privacy or loss of confidentiality.

3.1.6 Interaction Issues

The voting process shall be designed to minimize interaction difficulties for the voter.

- Voting machines with electronic image displays shall not require page scrolling by the voter.

Discussion: This is not an intuitive operation for those unfamiliar with the use of computers. Even those experienced with computers often do not notice a scroll bar and miss information at the bottom of the "page." Voting systems may require voters to move to the next or previous page.

- The voting machine shall provide unambiguous feedback regarding the voter's selection, such as displaying a checkmark beside the selected option or conspicuously changing its appearance.

- If the voting machine requires a response by a voter within a specific period of time, it shall issue an alert at least 20 seconds before this time period has expired and provide a means by which the voter may receive additional time.

- Input mechanisms shall be designed to minimize accidental activation.

- On touch screens, the sensitive touch areas shall have a minimum height of 0.5 inches and minimum width of 0.7 inches. The vertical distance between the centers of adjacent areas shall be at least 0.6 inches, and the horizontal distance at least 0.8 inches.

- No key or control on a voting machine shall have a repetitive effect as a result of being held in its active position.

Discussion: This is to preclude accidental activation. For instance, if a voter is typing in the name of a write-in candidate, depressing and holding the "e" key results in only a single "e" added to the name.

3.1.7 Privacy

The voting process shall preclude anyone else from determining the content of a voter's ballot, without the voter's cooperation.

Discussion: Privacy ensures that the voter can make selections based solely on his or her own preferences without intimidation or inhibition. Among other practices, this forbids the issuance of a receipt to the voter that would provide proof of how he or she voted.

3.1.7.1 Privacy at the Polls

When deployed according to the installation instructions provided by the vendor, the voting station shall prevent others from observing the contents of a voter's ballot.

Voter	TA316a-3: Next or previous "page" buttons MAY be used as such a non-
Voter Interaction	TA316b-1: After making a selection, a voting machine SHALL provide, to the voter, an unambiguous and conspicuous visual difference between selected contest choice(s) and the non-selected contest choices within a given contest.
Voter Interaction	and choices by the voter by displaying a checkmark beside the selected option.
Voter Interaction	TA316b-1-2: The voting machine MAY indicate the selection of candidates and choices by the voter by displaying an "X" beside the selected option.
Voter Interaction	TA316b-1-3: The voting machine MAY indicate the selection of candidates and choices by the voter by conspicuously changing its appearance.
Voter Interaction	TA316b-1-4: The voting machine MAY indicate the selection of candidates and choices by the use of highlighting around the chosen option.
Voter Interaction	TA316b-2: If a voting system implements an audio interface, after making a selection, THEN a voting machine SHALL provide, to the voter, an unambiguous and conspicuous audio confirmation of the selected contest choice(s) within a given contest.
Voter Interaction	TA316b-2-1: The voting machine MAY provide a spoken confirmation after making a selection (for an audio interface).
Voter Comprehension	TA316c-1: If a voting system has a time limit for voter input, and no voter input has been received at least 20 seconds prior to expiration of this time limit, THEN the voting system SHALL issue an alert to the voter.
Voter Comprehension	TA316c-2: The alert to the voter SHALL contain information telling the voter that the time limit for voter input is 20 seconds away.
Voter Comprehension	TA316c-3: The alert to the voter SHALL provide a mechanism for the voter to receive additional time beyond the 20 seconds remaining.
Voter Comprehension	TA316c-4: IF the voter does not respond to the alert within the alert time, THEN the voting system MAY go into an inactive state requiring poll worker intervention.
Voter Interaction	TA316di-1: FOR touch screens, the sensitive touch areas SHALL be equal to or greater than 0.5 inches high.
Voter Interaction	TA316di-2: FOR touch screens, the sensitive touch areas SHALL be equal to or greater than 0.7 inches wide.
Voter Interaction	TA316di-3: FOR touch screens, the vertical distance between the centers of adjacent areas SHALL be equal to or greater than 0.6 inches.
Voter Interaction	TA316di-4: FOR touch screens, the horizontal distance between the centers of adjacent areas SHALL be equal to or greater than 0.8 inches.
Voter Interaction	TA316di-1: FOR all input mechanisms on a given voting system ballot interface, holding an input mechanism in an active state SHALL have only one resulting instance of the input mechanism's function, regardless of duration or intensity of that activation.

Presented NASED Principles

The purpose of testing and certification of voting systems, including the development of the corresponding requirement to be tested, is as follows:

- *To assess the ability of the election systems to correctly execute secure, usable and accessible elections in the jurisdictions in order to provide assurance to voters that the election is an accurate reflection of the voters' will.*
- *To enable, not obstruct or impede, innovation and needed response to changing statutes, rules, or jurisdictional and voters' needs.*
- *To provide deployable systems and system modifications in a timely manner based on generally recognized elections calendars and schedules.*
- *To provide an open and transparent process that allows voters and election jurisdictions to assess the performance and capability of the election systems.*
- *To provide a set of testable requirements that jurisdictions can understand and use to procure and evaluate the performance of election systems.*

Scope of the VVSG

- What's in?
 - Areas where the technology interacts with functions of ballot creation all the way through to tabulation
 - Intersecting technologies if they communicate directly with the tabulation system
 - E-pollbook
 - Electronic ballot delivery tools
 - Accessibility
 - Security
 - Interoperability
 - Functionality

Next Steps

- Continue to further develop the TWiki pages.
- Hold public webinars to continue building out the process maps and to put out VVSG drafts for evaluation and feedback.
 - Standards Board members should sign up and participate in these public working groups.
 - Look for a follow up email invite in the coming weeks.
- TGDC will hold half day remote meetings over the summer.
 - Review Charter
 - Bring public feedback to the Committee
 - Continue Scoping Discussion