



16th Annual Conference

March Fong Eu Secretary of State Building 1500 11th Street

Sacramento, California 95814

1st Floor Auditorium

2026 Abstracts

The 2026 State Certification Testing of Election Systems National Conference represents the 16th annual convening of election system testing professionals, election administrators, and subject matter experts from across the nation.

This document is a compiled collection of all conference abstracts, organized to provide attendees with direct access to session topics, presenters, and research that support the continued advancement of election system certification, testing, and management.

The purpose of this conference is to promote collaboration and professional development by sharing best practices, exploring effective testing and implementation strategies, and identifying common challenges alongside practical solutions within the field of election systems.

The following are the 2026 Presentations:

- [**The Road to Widespread Deployment of Next Generation VVSG 2.0-Certified Voting Systems -**](#)
William Adler – Bipartisan Group
- [**Speaking the Same Language: Data Standards in Election Technology**](#) - Liz Beatrice, Frank Galizia, and Tom Freitag – EAC
- [**Compliance Automation with OSCAL**](#) – John Dziurlaj - The Turnout
- [**TeleVoting: Voter-Verified Ballots for UOCAVA Voters and Voters with Disabilities**](#) – Dr. Juan Gilbert – University of Florida
- [**If you Cannot Test the System, Test the People: The Voter Registration Access Proficiency Standards and Assessment \(VRAPSA\)**](#) – Payton Glesing and Lisa Gray – VSTOP
- [**Panel Session: Updating Certification Protocols in Response to Legislative Changes**](#)
- [**Ensuring Availability of Critical Data and Assets**](#) – Ryan Macias and Trevor Timmons – Election Security Exchange
- [**Security Verification Programs at the Procurement Level**](#) - Jared Marcotte – The Turnout
- [**Building Trust Through Testing: Securing Election Technology in 2026**](#) – Jennifer Morrell – The Elections Group and Ryan Macias – Election Security Exchange
- [**How the Fonz was Dropped from the Rolls: Strengthening Logic and Accuracy Testing for Electronic Pollbooks**](#) – Gretchen Reinemeyer
- [**Counting Chaos: Decentralization, Legal Gaps, and the Evolution of Election Standards**](#) - Dr. Gisela Salas, Paul Craft, and Kate McGregor – Freeman, Craft, McGregor
- [**VSTL's Working Under the Election Assistance Commission - Michael Santos, Evelyn Bickley, and Ben Roberson**](#) – SLI Compliance
- [**Bridging the Trust Gap: Strategic Frameworks for Communicating Election System Testing to a High-Scrutiny Public**](#) - Michelle Shafer - Election Technology Education Fund

Title: The Road to Widespread Deployment of Next Generation VVSG 2.0-Certified Voting Systems

Presenter: William Adler – Bipartisan Group

Abstract:

The transition to next generation voting systems that conform with the federal Voluntary Voting System Guidelines (VVSG) version 2.0 represents a critical opportunity to strengthen the security and accessibility of U.S. elections. VVSG 2.0, which was adopted by the U.S. Election Assistance Commission (EAC) in February 2021, establishes the most rigorous federal standards for certifying voting systems to date. More than five years later, two systems have been certified to VVSG 2.0, and multiple systems are in the pipeline.

We analyzed the age of voting equipment across the country, projected how long it will take to replace this equipment, and estimated how much replacement will cost.

Key Findings:

1. Many states need to replace their voting equipment soon. By the 2028 presidential election, the average age of voting equipment will be about 9.3 years, just below the typical retirement age of 9.7 years of service.
 2. Widespread replacement will be costly. Replacing all voting systems with VVSG 2.0-certified equipment in 2028 would cost roughly \$2.71 billion.
 3. Funding is the most important lever. Irregular federal investment has made long-term planning difficult.
 4. State policymakers are key partners. State law governs certification and procurement; without federal funding, states and localities must bear these costs alone.
 5. Widespread deployment may be years away. Based on historical replacement trends, more than half of voting equipment will be replaced between 2026 and 2032, but there is no guarantee that those replacements will be VVSG 2.0-certified—particularly without federal support.
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Title: Speaking the Same Language: Data Standards in Election Technology

Presenters: Liz Beatrice, Frank Galizia, and Tom Freitag – EAC

Abstract:

Modern election administration relies on a complex ecosystem of technologies, including voting systems, voter registration systems, electronic poll books, and election night reporting systems. As jurisdictions increasingly deploy multiple systems from different vendors, interoperability and standardized data formats become essential for efficient, secure, and accurate election operations. This presentation will explore the role of interoperability in election technology, with a focus on how common data formats support communication across election systems and jurisdictions. The session will highlight current federal efforts, including interoperability considerations within the U.S. Election Assistance Commission's pilot and certification programs. Attendees will gain insight into practical challenges election officials face when systems lack standardized formats, and how interoperability initiatives can improve data sharing, reporting, and election infrastructure resilience.

Title: Compliance Automation with OSCAL

Presenter: John Dziurlaj – The Turnout

Abstract:

Despite significant advances in technology, the world of compliance remains a documentation-heavy endeavor. This presentation introduces NIST OSCAL, the Open Security Control Assessment Language. OSCAL transforms the entire suite of assessment documents into interoperable, machine-readable artifacts that can be used and reused throughout the assessment process.

The presentation will address both OSCAL as a format and how it can be used in a real-world assessment program. Finally, it will cover automated assessments, a differential capability that reduces the cost while increasing the accuracy and repeatability of testing.

Title: TeleVoting: Voter-Verified Ballots for UOCAVA Voters and Voters with Disabilities

Presenter: Dr. Juan Gilbert – University of Florida

Abstract:

Paper-based voting methods, such as absentee and vote-by-mail, present accessibility and efficiency issues, including the process of mailing ballots to voters and have them mailed back after completion. Additionally, some voters with disabilities may require assistance to fill out their ballots, which raises concerns about privacy and independence. The Remote Accessible Vote-by-Mail (RAVBM) System provided some improvement by allowing voters to access and fill out the ballot electronically. However, voters are still required to print the ballot and mail the ballot back. This presentation introduces a new voting technology, Televoting, designed to address the limitations discussed previously. This technology enables voters to cast their ballots remotely while offering a live video feed that allows them to verify their ballot in real time. Televoting also enhances accessibility by empowering individuals with disabilities to vote privately and independently. This novel technology would also be beneficial for Uniformed and Overseas Citizens and Absentees Voting Act (UOCAVA) voters, allowing voters to cast their ballots efficiently and confidently. Televoting machines are stateless and designed to prevent unauthorized ballot access. A live video feed allows voters to verify their ballot is cast correctly, while a liveness test ensures the feed has not been tampered with. Televoting provides an efficient and secure method of voting for those unable to vote in person. As new voting technologies are implemented, state certification becomes a critical consideration. One pressing question remains: what does the certification process look like for a technology like this?

Title: If you Cannot Test the System, Test the People: The Voter Registration Access Proficiency Standards and Assessment (VRAPSA)

Presenters: Payton Glesing and Lisa Gray – VSTOP

Abstract:

Following the passage of the Help America Vote Act (HAVA) in 2002, each state was mandated to implement its own Statewide Voter Registration System (SVRS), an electronic database accessible to county and state election officials. Indiana was among the first states to do so, launching its system in November 2005. After American elections were designated as national critical infrastructure in January 2017 by the Secretary of the U.S. Department of Homeland Security, heightened expectations were established for the technical proficiency of officials accessing sensitive voter data within SVRS. Despite the critical nature of these systems, there are currently no universally standardized or required testing protocols for SVRS users in Indiana. In response to growing concerns over election security, the Governor of Indiana signed Public Law 71 on April 24, 2019, granting the Indiana Secretary of State authority to establish proficiency

standards for county officials accessing SVRS. The resulting Voter Registration Access Proficiency Standards and Assessment (VRAPSA) program, designed and administered by the Voting System Technical Oversight Program (VSTOP), evaluates user competency and promotes secure system use.

In the absence of direct system-level testing mandates for our Statewide Voter Registration System, VRAPSA reflects a practical and proactive approach to election security: "If you cannot test the system, test the people." This presentation will examine the development, implementation, and impact of VRAPSA, highlighting key challenges, best practices, and considerations for jurisdictions seeking to enhance election security through user proficiency standards.

Title: Updating Certification Protocols in Response to Legislative Changes

Moderator: Lisa Gray – VSTOP

Panelists: Spencer Drumm – VSTOP (Indiana), Dylan Lynch – Iowa SOS, Rodney Rodriguez – CA SOS, TBD

Abstract:

Election administration is an evolving field, shaped continually by legislative updates at the state and federal levels. This panel will explore how states adapt and modernize their voting system certification protocols in response to new laws, policy directives, and regulatory requirements.

Panelists representing state election offices, certification authorities, and technical oversight programs will discuss the practical and procedural challenges of aligning certification standards with legislative change. Topics will include timelines for implementation, coordination between lawmakers and election officials, maintaining system security and integrity during transitions, and ensuring compliance without disrupting election readiness.

The discussion will also highlight best practices for inter-agency communication, stakeholder engagement, and documentation updates that support transparent and consistent certification processes. Attendees will gain insight into how states balance innovation, security, and statutory compliance while maintaining voter confidence and system reliability.

This session is designed for election officials, policy makers, and election technology professionals seeking to understand the operational impacts of legislative change on certification frameworks and how states can proactively manage these transitions.

Title: Ensuring Availability of Critical Data and Assets

Presenter: Ryan Macias and Trevor Timmons – Election Security Exchange

Abstract:

Election officials are tasked with safeguarding the confidentiality, integrity, and availability (the “CIA Triad”) of their systems and data. Protecting critical data and systems against incidents that could affect these three foundational aspects of information security is a crucial responsibility. The Election Security Exchange has developed, and delivered, training and workshops on many of the issues that have occurred in the recent past regarding CIA Triad incidents. The Exchange proposes a discussion on key threats and the mitigations election officials can take to maintain the availability of critical election systems and data, including voting equipment, ballot images, CVRs, ballots, and e-pollbook data. The risk of an “availability” incident to critical election systems and data is the most applicable to attendees at the State Certification Testing of Election Systems National Conference (SCTESNC).

The presentation will identify – anonymously where applicable – incidents resulting in the loss of critical data, practices that could have protected against that loss, and response mechanisms. It will also describe methods states and local jurisdictions can employ to test their systems, audit critical records, and train their election staff to protect against the loss of critical data to ensure continuity of operations throughout the election cycle. The presentation will align with other proposals for ensuring the integrity of election systems by identifying any unintended modifications to systems or data through the conduct of pre- and post-election testing.

Title: Security Verification Programs at the Procurement Level

Presenter: Jared Marcotte – The Turnout

Abstract:

The integration of artificial intelligence and the constantly evolving cybersecurity landscape make security testing particularly challenging for under-resourced election offices. This presentation will explain how election offices can modify their procurement and security policies to ensure that developers implement security best practices and account for AI in their security processes. The presentation will also cover an update on the RABET-V program, a technology verification program developed for the new security landscape.

Title: Building Trust Through Testing: Securing Election Technology in 2026

Presenter: Jennifer Morrell – The Elections Group and Ryan Macias – Election Security Exchange

Abstract:

Election technology testing has evolved well beyond the tabulator-focused logic and accuracy tests of the past. Today's election officials manage a complex ecosystem of systems — voting equipment, electronic pollbooks, ballot-on-demand printers, remote ballot marking tools, and results reporting platforms — each with its own vulnerabilities and each dependent on the others. In a year defined by heightened security threats, inaccurate information, and intense public scrutiny, a rigorous and transparent testing program is one of the most powerful tools election officials have to safeguard accuracy and earn public confidence.

This session introduces attendees to "Systems Check: A Guide to Testing Election Technology", the comprehensive testing guide and accompanying checklists developed by The Elections Group. This presentation will highlight the structure and scope of these resources — how it addresses system interoperability, end-to-end testing, logic and accuracy testing, software validation (hash) testing, public demonstrations, and post-election testing — so attendees know where to turn when building or strengthening their own programs. We will discuss the security consideration woven throughout the guide and why these safeguards matter more than ever in 2026.

The session will also focus on communication: how to talk about your testing process with the public, media, candidates, and party observers in ways that demystify the technology and reinforce trust. We will share practical strategies for planning and conducting public demonstrations and framing testing as the transparent, verifiable foundation of an accurate election. Attendees will leave knowing how to put the training, guide and checklists to work in their state.

Title: How the Fonz was Dropped from the Rolls: Strengthening Logic and Accuracy Testing for Electronic Pollbooks

Presenter: Gretchen Reinemeyer

Abstract:

Errors in electronic pollbook programming continue to generate headlines after every election, undermining voter confidence and placing unnecessary strain on election administrators. While logic and accuracy (L&A) testing is a standard pre-election requirement, current approaches to pollbook testing are limited, incomplete, or insufficiently tailored to the specific configuration and use cases of local jurisdictions.

This session will focus on improving pre-election logic and accuracy testing for electronic pollbooks by examining common failure points such as poor data management practices, ballot style assignment errors, and system configuration issues. Drawing on practical experience, the presentation will explore why traditional pre-election testing frequently falls short and how administrators can move toward more rigorous, scenario based testing programs that better reflect Election Day conditions.

The session will also introduce a structured, hands-on workshop framework that state election administrators can use to train local officials on building effective pollbook testing programs tailored to their specific pollbook system and local challenges.

Attendees will leave with practical strategies for strengthening pollbook testing, reducing Election Day disruptions, and supporting local jurisdictions in moving beyond minimum compliance toward testing programs that more reliably support accurate and efficient election administration.

Title: Counting Chaos: Decentralization, Legal Gaps, and the Evolution of Election Standards

Presenter: Dr. Gisela Salas, Paul Craft, and Kate McGregor – Freeman, Craft, McGregor

Abstract:

Using the 1996 –2002 Florida experience as a central case study, this research examines how rapid legal changes were implemented without corresponding standards for voter education, ballot design, or system uniformity. The absence of statewide guidelines led to significant variation across counties in ballot layout, voting technologies, tabulation methods, and recount procedures. A historical analysis of best practices in election system testing and management, with a focus on how inconsistencies in state-level legal frameworks have shaped election administration, outcomes, and public confidence, will be presented.

The study highlights how decentralized decision-making, including reliance on disparate voting systems (e.g., punch cards, paper ballots, and mechanical machines), contributed to uneven voter experiences and elevated rates of overvotes and undervotes. It further explores the legal and procedural ambiguity surrounding voter intent and the lack of formally promulgated administrative rules governing canvassing practices. Judicial intervention, often by courts and attorneys with limited election law expertise, resulted in fragmented and sometimes conflicting rulings across jurisdictions.

Key lessons are drawn from these challenges, including the risks posed by uninformed decision makers, poor (inadequate) planning, insufficient standardization, inadequate training, and limited intergovernmental coordination. This research also identifies systemic vulnerabilities that persist in election infrastructure, emphasizing the importance of clear legal frameworks, uniform testing protocols, transparent recount standards, and proactive voter education.

Finally, opportunities for improvement through enhanced collaboration among federal, state, and local election officials, the development of consistent technical and procedural standards and the integration of risk-based testing and threat assessment models will be outlined. These findings aim to inform policy development and strengthen the resilience, reliability and public trust in contemporary election systems.

Title: VSTL's Working Under the Election Assistance Commission

Presenter: Michael Santos, Evelyn Bickley, and Ben Roberson – SLI Compliance

Abstract:

This presentation will provide an understanding of what a Voting System Test Lab does under the guidance and supervision of the EAC, as well as what areas of election technology are under the purview of the EAC, both under the “Voting System Testing And Certification Program (T&C)” (testing voting system to VSG 2.0) and the “Election Supporting Technology Evaluation Program (ESTEP)” (“testing electronic pollbooks”, “electronic ballot delivery systems”, as well as “voter registration systems”).

Title: Bridging the Trust Gap: Strategic Frameworks for Communicating Election System Testing to a High-Scrutiny Public

Presenter: Michelle Shafer - Election Technology Education Fund

Abstract:

In today’s election environment, rigorous system testing must be paired with clear public communication. As voting systems and audit practices grow more complex, well-intended transparency can backfire when technical artifacts are shared without context—creating an information gap that invites speculation and misinformation. This session focuses on practical ways election officials and technologists can communicate pre- and post-election testing in a manner that is accurate, understandable, and confidence-building.

We begin with a common challenge: certification and testing programs are often designed for internal assurance, while the public is asked to trust conclusions they cannot easily interpret. Drawing on research and field practice, we will outline a practical transparency approach that translates items like logic and accuracy (L&A) testing results, parallel testing documentation, and hash validation into plain-language explanations that work for media, party representatives,

candidates, and voters—without compromising security.

Rather than a checklist of outputs, the discussion centers on three communication moves election teams can adapt to their local context: (1) building simple visual and narrative explainers that make testing understandable to non-technical audiences; (2) setting up non-partisan observation so community members can describe what they saw and how the safeguards worked; and (3) preparing candid, timely messaging for anomalies or human error so isolated issues are not mischaracterized as systemic failures.

By shifting attention from what is tested to how results are explained, jurisdictions can strengthen confidence while maintaining the security and integrity of election technology. We will discuss language, examples, and adaptable templates for presenting testing in ways that are transparent, proportional, and usable by the audiences jurisdictions serve.
