VOTING SYSTEM APPROVAL IN CALIFORNIA

Lowell Finley

Deputy Secretary of State

Voting Systems Technology and Policy

California's definition of "voting system"

- "Voting system" means any mechanical, electromechanical, or electronic system and its software, or any combination of these used to cast or tabulate votes, or both.

Elections Code § 362

This definition is broader than it appears due to the definition of "software."

California's unusual definition of "software"

"Software" includes all programs, voting devices, cards, ballot cards or papers, operating manuals or instructions, test procedures, printouts, and other nonmechanical or nonelectrical items necessary to the operation of a voting system.

Elections Code § 355

Secretary of State approval is required

- (a) No voting system, in whole or in part, shall be used unless it has received the approval of the Secretary of State prior to any election at which it is to be first used.

- (b) No jurisdiction may purchase or contract for a voting system, in whole or in part, unless it has received the approval of the Secretary of State.

    - Elections Code § 19201

DRE systems have special requirements

- (a) On and after January 1, 2005, *the Secretary of State shall not approve* a direct recording electronic voting system unless the system has received federal qualification and includes an accessible voter verified paper audit trail.

- (b) On and after January 1, 2006, *a city or county shall not contract for or purchase* a direct recording electronic voting system unless the system has received federal qualification and includes an accessible voter verified paper audit trail.

  - Elections Code § 19250 [(c), (d) & (e) omitted]

Testing and approval process

- ● Submit detailed application form to the Office of Voting System Technology Assessment

- ● Submit $360,000 deposit to cover the estimated cost of testing consultants

- ● Develop a test plan and schedule

- ● Conduct testing

- ● Consultant and staff reports, public hearing, decision

Part 1

REQUEST FOR APPROVAL & SYSTEM IDENTIFICATION

1. APPLICATION DATE:

2. SYSTEM NAME AND VERSION:

3. APPLICANT(S)-

Name:
Principal Address:
Type: ☐ Manufacturer ☐ Distributor ☐ Jurisdiction ☐ Other:
Standing to present application:

Name:
Principal Address:
Type: ☐ Manufacturer ☐ Distributor ☐ Jurisdiction ☐ Other:
Standing to present application:

4. VENDOR CONTACT:

Name:		
Mail Address:		
Telephone:	Fax:	Email:

5. TYPE OF APPLICATION:

☐ Entirely new system
☐ Update of currently approved system (may include new components) – Date of Last Approval:
☐ Blended (combination of components from different voting systems)
☐ Amended application

☐ Request expedited handling.
   Justification:

6. IDENTIFICATION OF SYSTEM COMPONENTS:

Hardware

Name (Model #)	Version		Description
		☐ New ☐ Updated ☐ No Change	
		☐ New ☐ Updated ☐ No Change	
		☐ New ☐ Updated ☐ No Change	

		☐ New ☐ Updated ☐ No Change	
		☐ New ☐ Updated ☐ No Change	
		☐ New ☐ Updated ☐ No Change	
		☐ New ☐ Updated ☐ No Change	

Software

Name	Version		Description
		☐ New ☐ Updated ☐ No Change	
		☐ New ☐ Updated ☐ No Change	
		☐ New ☐ Updated ☐ No Change	
		☐ New ☐ Updated ☐ No Change	
		☐ New ☐ Updated ☐ No Change	
		☐ New ☐ Updated ☐ No Change	
		☐ New ☐ Updated ☐ No Change	

COTS Components

Name	Mdl/Version	Manufacturer or Specs; Description

7. FEDERAL QUALIFICATION NUMBER(S) (and Date Qualified)

8. ACCESSIBILITY

Describe the modalities of physical disabilities that are supported by this system and detail the nature of that support:

Detail the alternative languages that are supported by this system:

9. UPGRADE PLAN FOR EXISTING CUSTOMERS – Identify all current California customers that will be affected if this system is approved and detail the plan for their upgrade.

10. USERS' GROUP – Provide detail on the existing Users' Group or detail the plan for creating a Users' Group

I hereby certify that the information submitted on this form, as well as all attachments and submitted documentation is true, accurate and complete. I further certify that all hardware and software changes from previously approved versions of system components have been clearly identified in Section 5 – Change Log. Finally, I certify that I am legally authorized to sign and submit this application on behalf of the applicant organization(s).

Signature	Signature
Name (printed)	Name (printed)
Organization	Organization
Date	Date

Part 4

INDEX OF SYSTEM TECHNICAL DOCUMENTATION

APPLICATION DATE: SYSTEM NAME AND VERSION:

Applicant must submit complete technical documentation for each system component. All such documentation should be submitted in electronic format (MS Word or PDF). For hardware components of the system, you must include: (a) technical and operational specifications, (b) identifying photographs, (c) operating instructions (for jurisdiction users), (d) maintenance instructions, (e) training materials and, if a component that voters interact with, (f) simplified voter instructions. For software components of the system, you must include: (a) technical and operational specifications, (c) installation and operating instructions (for jurisdiction users), (e) training materials and, if a component that voters interact with, (f) simplified voter instructions.

In the table below, identify the specific document(s), including filename, document version number, section and page numbers that satisfy the above requirements for each non-COTS component of the voting system.

System component	(a) Technical & operational specifications	(b) Identifying photos	(c) Installation & operating instructions	(d) Maintenance instructions	(e) Training materials	(f) Simplified voter instructions

Key elements of state testing

- Ability to handle long, multi-jurisdictional ballots with large numbers of candidates and ballot measures

- Ability to rotate candidate names, meet other state requirements

- No Internet or wireless connectivity

- Volume testing

Key elements of state testing, cont'd

- Accessibility testing

- Source code review

- Open ended vulnerability testing

Written Use Procedures are required

- A condition of approval for every voting system

- Detailed written instructions on all procedures necessary for effective and secure use of the system

- Illustrations as appropriate

- Screen shots

- Photos of security seal placement

<u>Voting System Use Procedures Template</u>

1. Introduction
    1.1. System description and components
        Specifically identify all equipment, including model numbers and version numbers. Specifically identify all software and versions, including operating system and commercial off-the-shelf (COTS) applications, that are required or recommended for use with the system
    1.2. Terms and Definitions

2. Ballot Definition
    2.1. Overview
    2.2. Paper and printing specifications (as appropriate)
    2.3. Layout requirements and specifications (as appropriate)

3. System Installation and Configuration
    3.1. Hardware requirements and specifications
    3.2. Hardware and network set-up and configuration
    3.3. Software installation and configuration
        Are there installation options that must be installed or should not be installed for use in California?
    3.4. Acceptance Testing
        Certification Procedures, Article 13 requires an election jurisdiction to perform acceptance testing whenever it acquires a new voting system or whenever the voting system is modified. The results of that acceptance testing are to be certified to the Secretary of State. Please establish procedures for that testing in accordance with the requirements detailed in this Article.
    3.5. Software and firmware upgrades
        Detail how software and firmware upgrades will be distributed and how they are to be applied.

4. Election Set-up and Definition
    4.1. Programming and configuration of election management system/software, including audit records to be generated and retained
    4.2. Programming and configuration of vote recording/tabulation devices, including audit records to be generated and retained
    4.3. System diagnostic testing procedures, including audit records to be generated and retained
    4.4. System proofing
    4.5. Logic and accuracy testing of system and components
        The test is to verify the readiness of the system for the specific election and not just an equipment test. The test should be performed using the actual election definition and ballot formats.
        4.5.1. Pre-conditions for performance of tests, including test decks (as appropriate)
        4.5.2. Accuracy Test procedures
        4.5.3. Logic Test procedures
        4.5.4. Retention of test materials
        4.5.5. Logic and Accuracy Board and certification of testing
    4.6. Ballot tally programs
    4.7. Election Observer Panel

> *Describe all physical methods that should be employed for protecting the system, its components and data before, during and after an election*

    10.2. Logical security of system and components

        10.2.1. Essential and non-essential services and ports

> *What features, services and ports in the operating system and supporting software should be disabled? What features, services and ports are essential and cannot be disabled?*

        10.2.2. User-level security

> *Security accounts/roles should be defined such that each level of user has only sufficient privileges to perform the tasks of that role and no more. Please provide sufficient definitions to create these accounts/roles.*

        10.2.3. Anti-virus protection

        10.2.4. Procedures for verifying, checking, and installing essential updates and changes

> *These changes are primarily for installing critical updates to operating system, anti-virus protection or other third-party elements related to security and error correction.*

            10.2.4.1. Audit records for the changes showing what, when, who, and why

            10.2.4.2. Installation procedures for those updates which would normally be installed using an internet connection

            10.2.4.3. Acceptance testing after the installation.

    10.3. Security procedures for central processing

    10.4. Security procedures for polling places

    10.5. Audit trails

11. Biennial Hardware Certification and Notification

EC § 19220 requires jurisdictions to examine voting systems every two years and certify the results to the Secretary of State.

> *Describe detailed procedures for performing the examination and certifying the results to the Secretary of State.*

Possible changes to the state approval model

- The Elections Code authorizes the Secretary of State to establish and modify specifications and regulations for voting systems

- The Secretary of State shall establish the specifications for and the regulations governing voting machines, voting devices, vote tabulating devices, and any software used for each, including the programs and procedures for vote tabulating and testing. The criteria for establishing the specifications and regulations shall include, but not be limited to, the following:
- (a) The machine or device and its software shall be suitable for the purpose for which it is intended.
- (b) The system shall preserve the secrecy of the ballot.
- (c) The system shall be safe from fraud or manipulation.
  - Elections Code § 19205

New specifications and regulations?

- The Office of Voting System Technology Assessment is exploring new specifications and regulations

  - Changes in voting system technology and configurations
  - New development models: open source, common data formats, modularity
  - Uncertainties about the future of the federal standards and testing program
  - Best practices of other state testing programs
  - Cooperative testing with EAC, other states

Lowell Finley

Chief Counsel

and

Deputy Secretary of State for

   Voting Systems Technology and Policy
Secretary of State Debra Bowen
(916) 653-7244
Lowell.Finley@sos.ca.gov