



DEAN C. LOGAN

Los Angeles County
Registrar-Recorder/County Clerk
12400 Imperial Highway
Norwalk, CA 90650

Voting Systems in Los Angeles County

Assessing Critical Factors



Topics

- Evolution of Current County Voting System
- Critical Implementation Factors
- Additional Considerations



Evolution of Current Voting System

1960's- IBM Mainframe Technology

1990's- MTS on DOS Computers

2000- Touchscreen Early Voting

2003- InkaVote

2006- InkaVote Plus



1960's IBM mainframe technology





1990's: Microcomputer Tally System on DOS Personal Computers





2000: Touchscreen Early Voting





2003: InkaVote Optical Scan Voting System





2006: InkaVote Plus PBR and ABB





Critical Implementation Factors

- Ballot Format
- Tally Location & Method
- Logistics, Handling, and Security

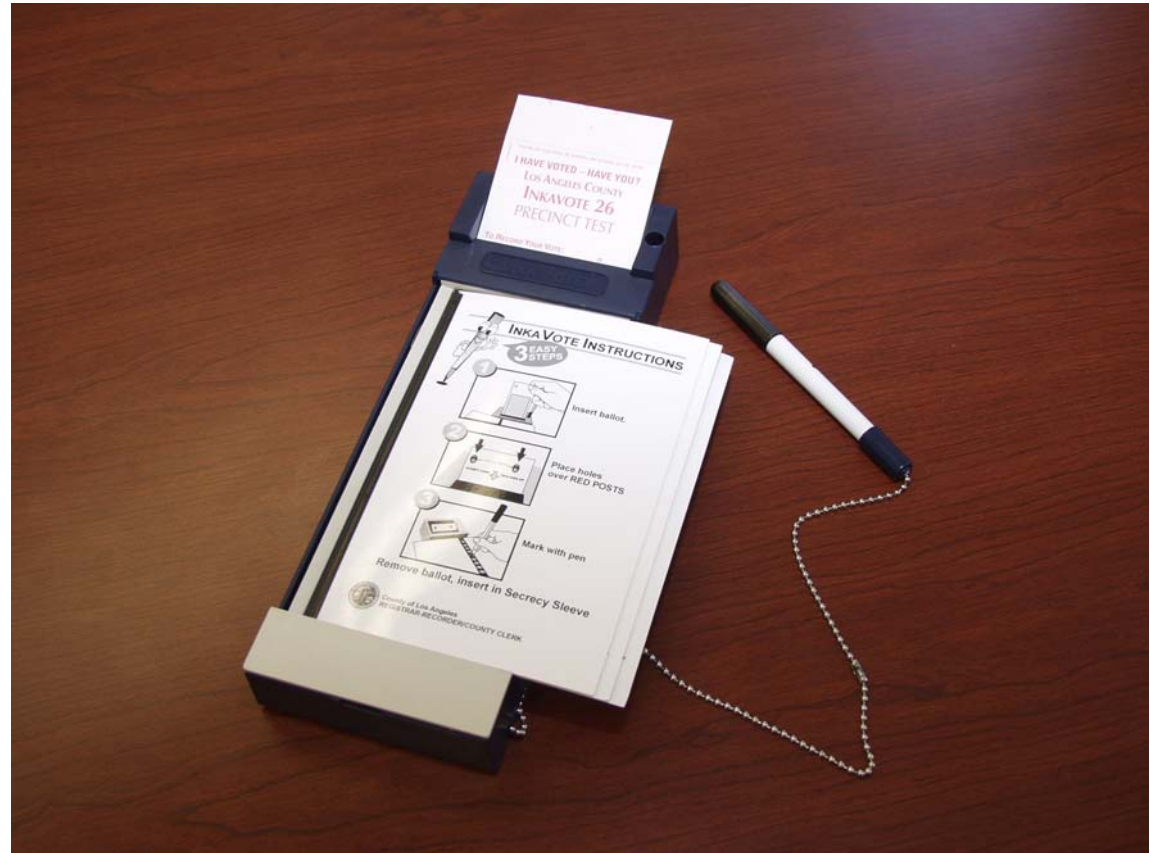
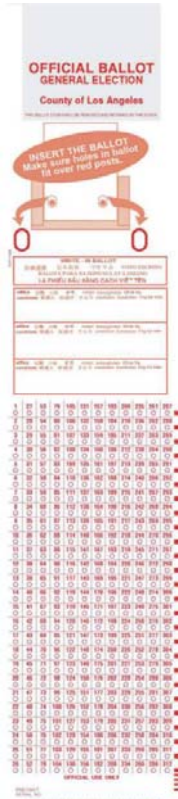


Ballot Format

- Small Format Ballot Card
- Large Format Full Face Ballot Sheet
- Electronic Ballots



Small Format Ballot Card





Small Format Ballot Card

- Considerations
 - All ballot responses recorded on one ballot
 - One ballot per voter
 - Light weight for easier handling
 - Compact for efficient storage and distribution
- Operational Challenges
 - Limited support for “name on ballot” layouts
 - Requires additional vote recorder device or ballot guide
 - No vote recording device for VBM voting
 - Non-intuitive voting interface



Large Format Full-Face Ballot

OFFICIAL GENERAL ELECTION BALLOT					
A	County	B	General Election	C	November 4, 2008
<p>Instructions to Voter</p> <p>1. To vote, you must completely darken the oval (●) to the left of the candidate or answer of your choice. If you vote for more choices than permitted, your vote for that race will not be counted.</p> <p>2. To cast a write-in vote, darken the oval (●) to the left of the line provided and write in the candidate's name. Only a candidate who has timely filed a valid notice of intent to become a write-in candidate may have a vote counted in his or her favor.</p> <p>3. If you make an error, please return your ballot to an election official and obtain a new ballot. Please do not attempt to erase or cross out any marks made in error.</p> <p>OFFICIAL OFFICE TYPE BALLOT</p> <p>For President and Vice-President Vote For One (1)</p> <p>To vote for President and Vice-President, select the joint candidates of your choice. Your vote will be counted for each of the candidates for presidential electors whose names have been certified to the Secretary of State.</p> <p>For President: <input type="radio"/> Chuck Baldwin For Vice-President <input type="radio"/> Darrell L. Castle Constitution Party</p> <p>For President: <input type="radio"/> Bob Barr For Vice-President <input type="radio"/> Wayne Allyn Root Libertarian Party of Ohio</p> <p>For President: <input type="radio"/> Richard Duncan For Vice-President <input type="radio"/> Ricky Johnson</p> <p>For President: <input type="radio"/> John McCain For Vice-President <input type="radio"/> Sarah Palin Republican</p> <p>For President: <input type="radio"/> Cynthia McKinney For Vice-President <input type="radio"/> Rosa A. Clemente Green Party of the United States</p> <p>For President: <input type="radio"/> Brian Moore For Vice-President <input type="radio"/> Stewart Alexander Socialist Party USA</p> <p>For President: <input type="radio"/> Ralph Nader For Vice-President <input type="radio"/> Matt Gonzalez</p> <p>For President: <input type="radio"/> Barack Obama For Vice-President <input type="radio"/> Joe Biden Democratic</p> <p>For President: Write-In _____ For Vice-President Write-In _____</p>		<p>For Attorney General (Unexpired Term Ending January 9, 2011) Vote For One (1)</p> <p><input type="radio"/> Richard Cordray Democratic</p> <p><input type="radio"/> Mike Crites Republican</p> <p><input type="radio"/> Robert M. Owens</p> <p>For Representative to Congress (_____ District) Vote For One (1)</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p> <p>For State Senator (_____ District) Vote For One (1)</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p> <p>For State Representative (_____ District) Vote For One (1)</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p>		<p>VOTE BOTH SIDES</p>	
A	001 TWP A	B	0001:1	C	001

This SAMPLE ballot provides the CORRECT TITLES and ORDER OF OFFICES for the ballot layout for candidates for the November 2008 General Election. The space for a write-in candidate should be provided only if applicable. See Ballot Printing Instructions.

OFFICIAL GENERAL ELECTION BALLOT					
D	County	E	General Election	F	November 4, 2008
<p>For County Commissioner (Full Term Commencing 1-2-09) Vote For One (1)</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p> <p>For County Commissioner (Full Term Commencing 1-3-09) Vote For One (1)</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p> <p>For Prosecuting Attorney (Vote For One (1))</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p> <p>For Clerk of Court of Common Pleas (Vote For One (1))</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p> <p>For Sheriff (Vote For One (1))</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p>		<p>For County Recorder (Vote For One (1))</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p> <p>For County Treasurer (Vote For One (1))</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p> <p>For County Engineer (Vote For One (1))</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p> <p>For Coroner (Vote For One (1))</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p> <p>OFFICIAL NONPARTISAN BALLOT</p> <p>For Member of State Board of Education (_____ District) (Vote For One (1))</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p>		<p>For Justice of the Supreme Court (Full Term Commencing 1-1-09) Vote For One (1)</p> <p><input type="radio"/> Maureen O'Connor</p> <p><input type="radio"/> Joseph D. Russo</p> <p>For Justice of the Supreme Court (Full Term Commencing 1-2-09) Vote For One (1)</p> <p><input type="radio"/> Peter M. Sikora</p> <p><input type="radio"/> Evelyn L. Stratton</p> <p>For Judge of the Court of Appeals (_____ District) (Full Term Commencing _____) Vote For One (1)</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p> <p>For Judge of the Court of Appeals (_____ District) (Full Term Commencing _____) Vote For One (1)</p> <p><input type="radio"/> [Print Candidate Name]</p> <p><input type="radio"/> [Print Candidate Name]</p>	
D	001 TWP A	E	0001:1	F	001

This SAMPLE ballot provides the CORRECT TITLES and ORDER OF OFFICES for the ballot layout for candidates for the November 2008 General Election. The space for a write-in candidate should be provided only if applicable. See Ballot Printing Instructions.



Large Format Full-Face Ballot

- Considerations
 - Intuitive interface, easy to use
 - Vote recording device not necessary
 - Most widely used (consistency)
- Operational Challenges
 - Limited contest capacity
 - Unwieldy handling, more workspace needed
 - Volume and weight
 - Does not resolve voter intent interpretation issue



Electronic Ballots





Electronic Ballot

- Considerations
 - Avoids paper ballot procurement process
 - Unlimited contest capacity
 - Integrated support for accessibility (zoom, contrast, audio, foreign languages) and second-chance voting
 - Better support for primary elections
 - Touchscreen technology becoming mainstream, intuitive
- Operational Challenges
 - Lack of true paper ballots for audit/recount
 - Cannot be used for VBM voting
 - Computer hardware dependent (30,000 – 40,000 devices needed for major election)
 - Limited demonstrated transparency and security



Tally Location

- Central Tally
 - Ballots are transported back to a central tally facility for tabulation and reporting
- Precinct Tally
 - Ballots are tabulated at precincts, only precinct results are submitted to election headquarters for election night compilation and reporting



Tally Method

- Hand-Count
 - Paper ballots are tallied by pollworkers, volunteers and election staff
- Optical Scan
 - Paper ballots are scanned through a machine that reads the markings on the ballot to tally
- Electronic
 - Votes are tallied electronically after voters mark selection on a device such as a touchscreen or keyboard



Logistics, Handling, and Security

- Voting Materials Delivery Model
- Equipment Handling Features
- Security and Chain of Custody



Voting Materials Delivery Model

- Truck Route and Stop
 - Complex process
 - Resource intensive, costly
 - Challenging route and stop planning
 - Delivery and materials control issues
- Inspector Supply Pick Up
 - Easier to implement, better materials control
 - Motivated inspectors, high delivery success rate
 - Constraints on weight and dimension of materials



Constraints of ISPU Delivery Model





Equipment Handling Features

- Dimension and Weight
 - Light and compact
- Portage Amenities
 - Hand grips, extending handles, straps, wheels
 - Stability during transport, durability
- Storage and Maintenance
 - Efficient stacking
 - In situ maintenance and election configuration
- Connectivity
 - Power requirements at polling place
 - Requirements for system programming



Security and Chain of Custody

- Number of units per polling place
 - Increases complexity of custody control
- Physical security vulnerabilities
 - More serialized security seals and locks
- Timelines and span of control
 - Deadlines, time needed for distribution
 - Sleepover issue



Additional Considerations

- Regulatory Environment
- Market
- Development and Implementation
Timeline
- Future Needs and Trends