

GRAND JURY CASTS VOTE OF CONFIDENCE IN OC ELECTION PROCESS

SUMMARY

When Orange County voters go to the polls in February, can they trust their electronic voting machines?

The 2007-2008 Orange County Grand Jury studied the issue of voter trust after reading reports of documented problems of voting machine errors or failures, lost votes, mechanical errors, incomplete ballots and the installation of uncertified software into voting systems across the country in recent elections.

The California Secretary of State ordered a top-to-bottom review to test the security of the state's various electronic voting systems. As a result, all the electronic voting systems, including Orange County's Hart InterCivic System were decertified on August 3, 2007, and then some of the systems were conditionally recertified, including Hart InterCivic.

"Democracy by definition is about free and fair elections," said Secretary of State Debra Bowen.

The core of the Grand Jury's concern is the privacy, the security and the accuracy of the vote.

The 2007-2008 Orange County Grand Jury investigated the County's Registrar of Voters office to determine if the deficiencies found in its Hart InterCivic voting process were corrected and if these corrections had removed the concerns of the Secretary of State.

The Grand Jury learned that the Hart InterCivic manufacturer and the Orange County Registrar of Voters made the improvements required by the Secretary of State and then submitted the system to a new round of certification tests. The Orange County electronic voting machines have been given a conditional recertification.

Following its investigation, the Grand Jury has confidence in the integrity of the County's voting system and procedures. The Registrar of Voters, Neal Kelley, is to be commended for implementing the changes mandated by the California Secretary of State and for instituting many other proactive measures. The Grand Jury is confident that the February 2008 votes will be private, secure and accurate.

REASON FOR INVESTIGATION

Many election problems have been reported across the United States and a major focus of concern has been the integrity of electronic voting machines. Secretary of State Debra Bowen required a review to determine the reliability and security of electronic voting machines used by the state's 58 counties. Due to the concerns identified in this review, the tested electronic voting systems were decertified and then conditionally recertified. Orange County's Hart InterCivic voting system had to meet 36 requirements before final recertification could be granted. The Grand Jury believed the Orange County voters needed an update on the status of the corrections required for the county's Hart InterCivic System.

METHOD OF INVESTIGATION

The Grand Jury studied Secretary of State Bowen's official documents (see Appendices 1-5) and the related website, www.sos.ca.gov. "The Hart InterCivic Response to the California Secretary of State Top-To-Bottom Review" (see Appendix 6) was studied as was the Executive Summary of the University of California Red Team's testing of the Hart InterCivic System, (see Appendix 7). The Registrar of Voters website, www.ocvote.com, was also examined. During the investigation jurors visited the Registrar of Voters office on many occasions. The Registrar was interviewed by the entire Grand Jury panel. The Grand Jury was also given a thorough tour of the premises, with a presentation and a demonstration of the voting equipment security measures and a review of their computer systems and procedures.

BACKGROUND AND FACTS

The October 2002 Help America Vote Act, known as HAVA, is landmark legislation and is the most sweeping election reform law since the Voting Rights Act of 1965. HAVA contains basic changes to election laws. It provides specific procedural and technological solutions that affect the operation and conduct of elections. One change is the requirement allowing disabled voters to cast a vote with ease and privacy. It also mandates the deployment of new technology for casting ballots and for recording and tallying votes. Therefore, equipment is needed to enable all voters to vote independently, confidentially, and to be able to review their ballot to verify their choices.

As states attempted to comply with HAVA, many problems surfaced when electronic voting systems were purchased and put into use. The public expressed much distrust and dismay about the voting process. At the California Secretary of State's January 2007 inauguration, Debra Bowen announced her intention to conduct a top-to-bottom review of the state's voting systems. The Secretary of State circulated a draft of criteria for a review of the voting systems approved for use on March 22, 2007. California Elections Code 19222 requires that the Secretary of State periodically review all voting systems to determine if they are defective and to withdraw previous approval granted for all or part of a voting system if it is found to be unacceptable. This code reads that any such withdrawal of approval can only affect elections that are held six months or more after

the date of decision. The next statewide election for California's 15.7 million registered voters will be the presidential primary on February 5, 2008.

In June, the state contracted with the University of California to test the security of three electronic voting systems as part of the review. The testing of the Hart InterCivic System began on June 22, 2007, and concluded on July 19, 2007. Also tested were the Diebold and Sequoia Direct Recording Electronic systems used in surrounding counties. The UC investigators found that all three could be exploited to compromise the accuracy and secrecy of the voting system. After a public hearing, Secretary Bowen determined that the three electronic systems tested were unacceptable. Bowen's office ordered 36 changes to be made prior to recertification of the Hart InterCivic voting system. These requirements centered on:

- **Improvement of Physical Security** - Electronic voting machines must be protected against unauthorized physical and electronic access while: a) in storage, b) at polling locations, c) at the central election center and d) while in transit between storage, the polling sites and the election center.
- **Enhancement of Personnel Security Training** - Election officials and poll workers must be acquainted with the concepts of information technology security as well as procedures to invoke when security rules are compromised.
- **Development of Contingency Planning** - Plans must be developed to handle the situation in which a polling place or a voting station is rendered inoperative. A work-around process (or back-up plan) must be developed and tested for each contingency.

Registrar Kelley had already fulfilled many of the 36 requirements and Hart InterCivic subsequently made the necessary improvements to Orange County's system. Orange County's Hart InterCivic voting system was recertified and has only to comply with increased security on the early voting process and is subject to post-election manual audit requirements. Therefore, all the Hart machines can be used in Orange County with the aforementioned compliance measures. The Diebold and Sequoia voting systems, neither of which is used in Orange County, received only limited recertification.



“Hart InterCivic’s eSlate is a multilingual voter-activated electronic voting system where the voter turns a Select Wheel and pushes a button to indicate his/her preference. The eSlate is connected via cable to the Judge’s Booth Controller which provides vote activation and vote storage for up to twelve eSlates. A poll worker issues a 4-digit, randomly generated Access Code to the voter using the JBC. The voter enters the Access Code on the eSlate and votes using the select Wheel and Buttons. Once the ballot is cast, the votes are stored in redundant and physically separate areas of the [Hart InterCivic] eSlate System, including the eSlate, JBC and flash memory. The votes are transmitted via a cable to the JBC, and are stored on the JBC and on a flash memory card (Mobile Ballot Box or MBB) inside the JBC. Then the MBB is physically transported to election headquarters for tabulation.” –www.hartintercivic.com

MEASURES TAKEN TO ADDRESS VOTER CONCERNS:

Responding to the major points within the Secretary of State's findings and to further enhance voter confidence, the Registrar of Voters made the following improvements:

A. Physical Security

- **Hacking** – The County's entire electronic voting system is stand-alone, with no connection to the internet or other network. It has no wireless connectivity. The Secretary of State provides a copy of the tabulation software used with each specific election. The Registrar of Voters can reset passwords and can reload backed-up data files. Only services explicitly required by the Hart Direct Recording Electronic systems are enabled.
- **Vote tampering** – The Judges Booth Controllers (JBC), similar to electronic sealed ballot boxes, have tamper-resistant tape applied to their printer and modem ports. Serialized seals, cables and locks are used throughout the process. There is extensive video monitoring and controlled access to the Registrar of Voters building entrances and to all sensitive areas within the building. Armed Sheriff Department deputies accompany the ballots in transit and guard them at the Registrar of Voters site.

“The Judges Booth Controller is the console for controlling up to 12 eSlate voting devices at the polling sites. This device generates access codes, distributes appropriate ballot configurations to the eSlate, records Cast Voter Records, stores all the ballots cast on the eSlate to internal memory and to a mobile ballot box, and accumulates and reports votes results at the end of the Election Day.” --

www.hartintercivic.com



- **Theft** – Equipment is inventoried. Access to Registrar of Voters building areas is restricted, video monitoring provides surveillance, and interior rooms have observation windows. Equipment is locked and/or secured in safe storage areas, backup machines are readily available, and armed Sheriff Department deputies are present at the Registrar of Voters building during the counting and during ballot pickups. A mobile technical assist team is available to correct problems. Voter equipment is stored in enclosed areas with serialized seals on access gates.
- **Disgruntled staffers** – Background checks are conducted on all staff. Work areas have observation windows and video monitoring. Two-person integrity is required, with a complex password protection for logging into systems for ballot counting.

- **Duplication** - Unlike most Direct Recording Electronic voting systems, the Hart InterCivic system does not use a “smart card,” which is vulnerable to duplication. Instead the data is included in the JBC and is secured with a serialized metal seal.
- **Access** - A 4-digit random access code issued to each individual voter is used for activation, eliminating a key point of attack, complexity and malfunction.
- **Modifying code** - The Hart InterCivic’s Precinct Voting System contains no software, only preprogrammed firmware that cannot be altered, reducing the risk of unauthorized code modification.
- **Unauthorized access** - Voting device components found at a voting site possess only minimal functionality compared to a fully operational personal computer. This minimizes the risk of unauthorized system access and code modification.

B. Training

- **Training of staff** - Personnel annually take at least four classes such as Signature Verification Standards and Certification, Election Code, Ballot Resolving Certification Part 1 and 2, Disability Access Survey, and Cultural Awareness.
- **Polling places and poll workers** - Cell phones and a Help Desk are available. Workers are required to attend training and receive a training manual and a training DVD or video. Optional practice classes are re-offered shortly before the polls open.

C. Contingency Planning

- **Natural disasters** – Orange County’s vote counting center has sprinkler systems; server room halon fire extinguisher system; intruder alarm systems; alarm systems installed for smoke, temperature rate of rise, and fire alarms; portable fire extinguishers, and plans to minimize the potential damage of flooding and earthquakes.
- **Power outages** – Backup generators are present and regularly tested.

D. Registrar of Voter Innovations

- **Early voting** - From Sunday, January 20, 2008, to Tuesday, January 29, 2008, the Registrar of Voters offers early voting sites such as John Wayne Airport and UC Irvine. A complete list is available at www.ocvote.com. This is an opportunity for those with busy schedules to vote before Election Day (February 5).

- **Track and trace mailed ballots** - At the end of 2006 through early 2007, the Registrar of Voters began using a “track and trace” system that provided an ability to determine the precise location of a mailed ballot while it is being processed. The vote-by-mail ballots are delivered to the United States Postal Service, which scans them and uploads the information into their database. This system allows the Registrar’s office to follow the delivery status of mailed ballots. Voters’ inquiries about the delivery of their ballots can then be managed through the Registrar of Voters website. The Registrar has increased the capacity of the vote-by-mail system prior to the 2008 election cycle. Beginning in March 2008, SB 1725 requires that all California Registrars of Voters provide the vote-by-mail tracking system which will allow voters to check on the status of their mailed-in ballot without compromising the privacy of their vote. The Registrar of Voters website will allow voters to see if their returned ballots have been verified in the election management system. The U.S. Postal Service and the Registrar of Voters periodically meet to ensure that the program works smoothly.

CONCLUSION

After thorough study, the 2007-2008 Orange County Grand Jury is convinced that the Hart InterCivic voting system, in conjunction with the security measures instituted by the Registrar of Voters and approved by the California Secretary of State, provides voters with an electoral system which is second to none. Neal Kelley is to be commended for his knowledge of voting technology and safeguards and for his efficient and creative management in enacting a proactive system to support Orange County voters.

Based on information available today, the citizens of Orange County should have the utmost confidence that a vote cast on Election Day will be accurately recorded and securely tallied as the Registrar of Voters actively protects their most fundamental democratic principle – the right to vote.

FINDINGS

In accordance with California Penal Code sections 933 and 933.05, each finding will be responded to by the government entity to which it is addressed. The responses are to be submitted to the Presiding Judge of the Superior Court. The 2007-2008 Orange County Grand Jury has arrived at the following findings:

- F-1 The Registrar of Voters instituted security measures to ensure that votes are private, secure and accurate.
- F-2 The Registrar and his staff have the technological expertise to conduct secure elections.
- F-3 The Registrar successfully collaborated with the California Secretary of State to arrive at the current effective election system.

Responses to Findings F-1 through F-3 are requested from the Registrar of Voters.

Responses to Findings F-1 through F-3 are required from the Board of Supervisors.

RECOMMENDATIONS

In accordance with California Penal Code sections 933 and 933.05, each recommendation will be responded to by the government entity to which it is addressed. The responses are to be submitted to the Presiding Judge of the Superior Court. Based on the findings of this report, the 2007-2008 Orange County Grand Jury makes the following recommendations:

- R-1 The Registrar of Voters shall continue to assess challenges to its system to maximize privacy, security and accuracy.
- R-2 The Registrar and his staff shall continue to invest in education and training to maintain an advanced level of technological expertise.
- R-3 The Registrar shall continue to collaborate with the Secretary of State on election issues.

Responses to Recommendations R-1 through R-3 are requested from the Registrar of Voters.

Responses to Recommendations R-1 through R-3 are required from the Board of Supervisors.

REQUIRED RESPONSES:

The California Penal Code specifies the required permissible responses to the findings and recommendations contained in this report. The specific sections are quoted below:

§933.05

(a) For purposes of subdivision (b) of Section 933, as to each grand jury finding, the responding person or entity shall indicate one of the following:

- (1) The respondent agrees with the finding.
- (2) The respondent disagrees wholly or partially with the finding, in which case the response shall specify the portion of the finding that is disputed and shall include an explanation of the reasons therefore.

(b) For purposes of subdivision (b) of Section 933, as to each grand jury recommendation, the responding person or entity shall report one of the following actions:

- (1) The recommendation has been implemented, with a summary regarding the implemented action.
- (2) The recommendation has not yet been implemented, but will be implemented in the future, with a timeframe for implementation.
- (3) The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a timeframe for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This timeframe shall not exceed six months from the date of publication of the grand jury report.
- (4) The recommendation will not be implemented because it is not warranted or is not reasonable, with an explanation therefore.

APPENDIX

1. Bowen, Debra. "Frequently Asked Questions About Secretary of State Debra Bowen's Top-To-Bottom Review of California's Voting Systems." Website, www.sos.ca.gov
2. Bowen, Debra. "Withdrawal of Approval of Hart InterCivic System 6.2.1 DRE & Optical Scan Voting System and Conditional Re-Approval of use of Hart InterCivic System 6.2.1 DRE and Optical Scan Voting System." www.sos.ca.gov
3. California Secretary of State Debra Bowen's website. "Help America Vote Act of 2002 (HAVA)." www.sos.ca.gov
4. Bowen, Debra. "Is Your Vote Safe?" www.debrabowen.com
5. Bowen, Debra. "Post-Election Manual Tally Requirements." www.sos.ca.gov
6. Hart InterCivic, Inc. McClure, Neal, Chief Technology Officer. "Response for California SOS Top-To-Bottom Review of Electronic Voting Systems." July 10, 2007.
7. Report of the UC Red Team investigating the Hart InterCivic 6.2.1. www.sos.ca.gov/elections/elections_vsr.htm.