

November 2, 2004, General Election Orange County, California

1. Summary

The November 2, 2004, general election was Orange County's second election and first presidential election using electronic voting equipment. The grand jury conducted a study of the election focusing on electronic voting.

The grand jury also looked at the security of the electronic system. The grand jury found that the election process was well planned and, despite the usual human foibles, was executed without calamity. The registrar of voters (ROV) handled 1,094,405 cast ballots (73.2% of the county's 1,495,824 registered voters) with few problems. The grand jury also found that there was widespread acceptance by voters of the electronic voting system. (See graphs, page 3.)

Acronyms in This Report

BOS	Orange County Board of Supervisors
HAVA	Help America Vote Act
JBC	Judges Booth Controller
ROV	Registrar of Voters

2. Introduction and Purpose of Study

The 2004-2005 Grand Jury embarked on this study after its members became aware of problems encountered during the March 2004 primary, the first in which the Hart InterCivic eSlate™ electronic voting system was used in Orange County.

The Orange County Board of Supervisors (BOS) appointed a special elections subcommittee to study the March 2004 election. The group identified issues and recommended corrective actions to the Orange County Registrar of Voters, the office that administers most elections in the county. The subcommittee's report was issued on May 18, 2004, and is on file with the clerk of the board and at the ROV.

The importance of the November presidential election weighed on the minds of grand jurors. They noted that, in light of the questions raised in connection with the 2000 presidential election and the problems experienced in the Orange County 2004 primary, there would be a need for county government to conduct the November 2004 election in a manner that would ensure the integrity of the election and promote public confidence in the process. Of particular interest to the grand jury was seeing if problems experienced in the March primary would be overcome in the November 2004 general election. After completing this study, the grand jury was satisfied the necessary improvements were made.

3. Method of Study

All 19 members of the grand jury participated in the study of the November 2, 2004, election. The grand jury designed questions that focused on the voting process, taking care to avoid anything of a political nature. The study was divided into four parts:

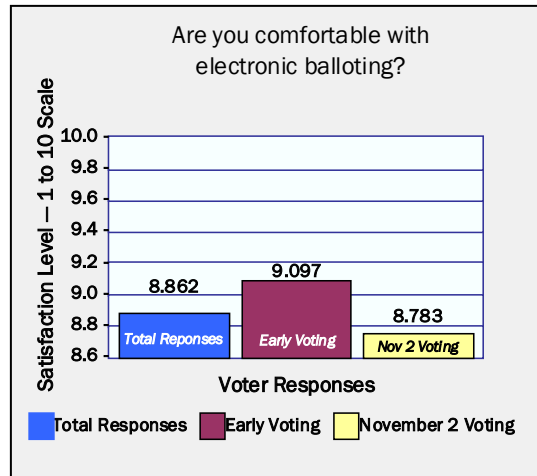
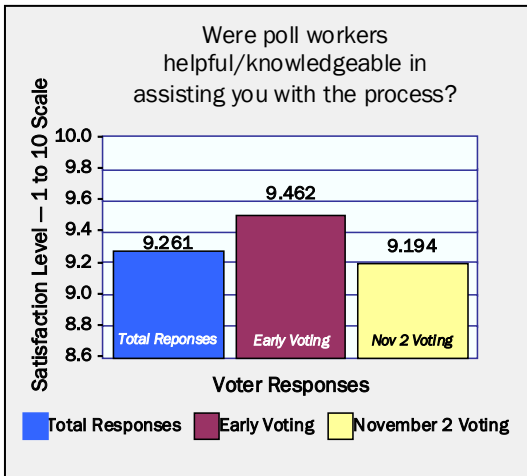
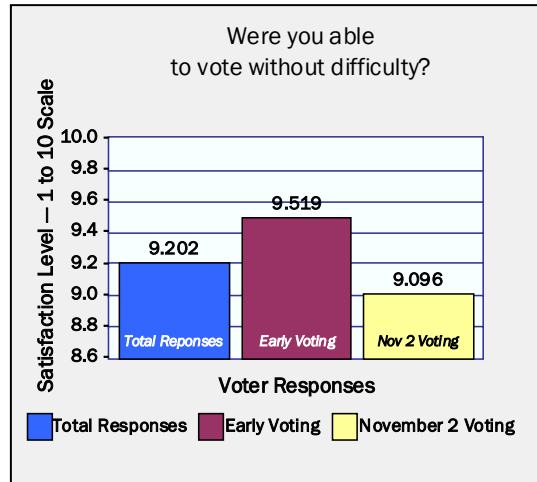
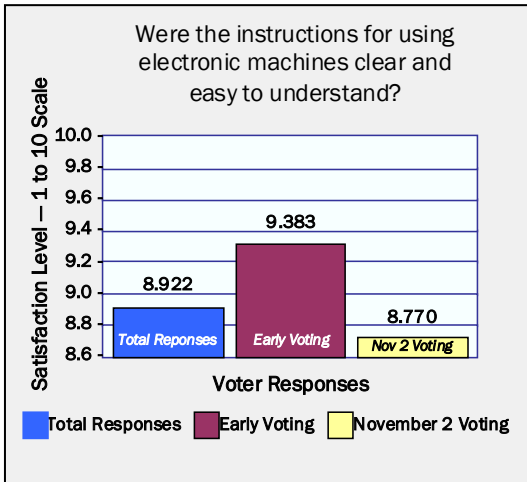
- poll worker training
- early voting
- voter and poll worker reaction to electronic voting
- vote count

The grand jury also educated itself with regard to the security of electronic voting. In all, grand jurors interviewed more than 900 voters and 100 poll workers during the early voting period of October 5-29 and on November 2, Election Day.

- Seven grand jurors monitored early voting throughout October, observing polling place operations and interviewing voters and poll workers.
- Prior to Election Day, 18 grand jurors attended standard poll worker training sessions. Their purpose was to evaluate the ROV-conducted training anonymously and at different locations.
- Six grand jurors rode with mobile election coordinators—the ROV's first responders to precinct problems. The grand jurors reported their observations of precinct operations and the election coordinators' responses to problems.
- Three grand jurors served, anonymously, as poll workers on Election Day. Their observations included comparisons of their training with circumstances they encountered on Election Day.
- Ten grand jurors visited precincts in various parts of the county, observing precinct operations.
- Three members of the grand jury were assigned to observe election night activity (the tally) at the ROV's office in Santa Ana.
- During its election study the grand jury also toured ROV facilities, interviewed officials and staff, and attended meetings of the Registrar's Community Advisory Committee.

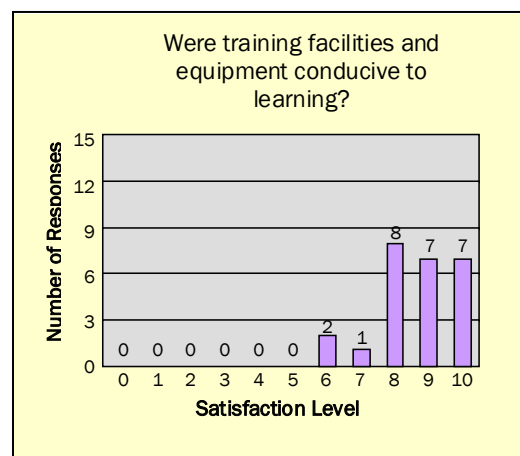
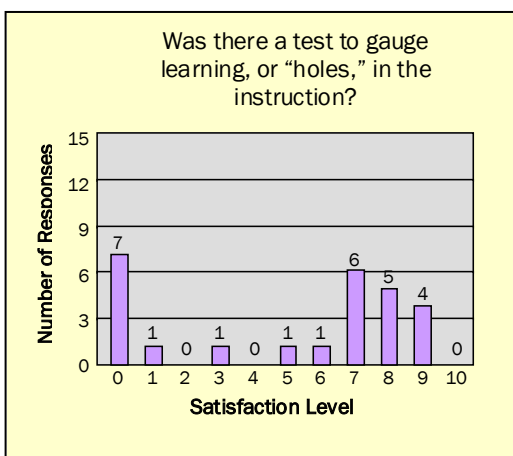
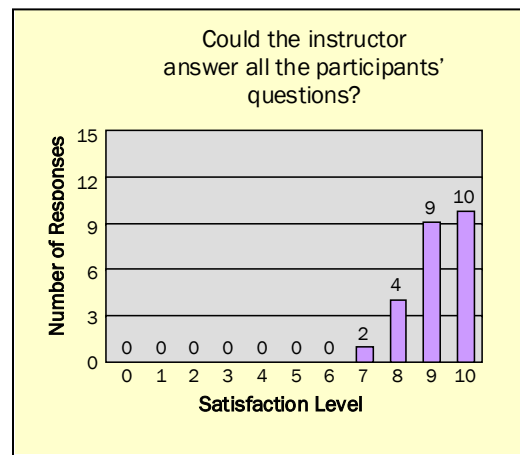
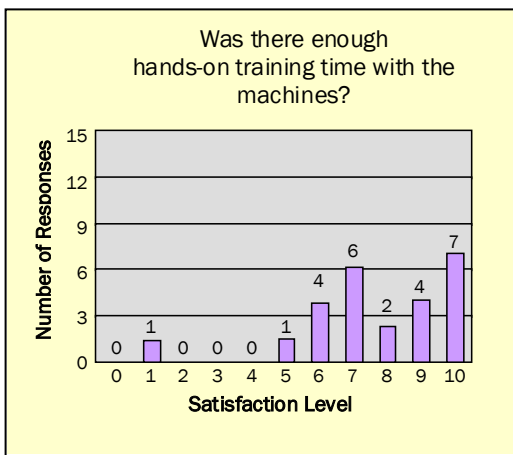
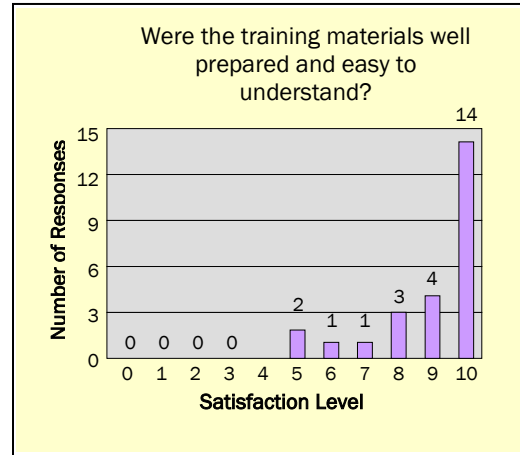
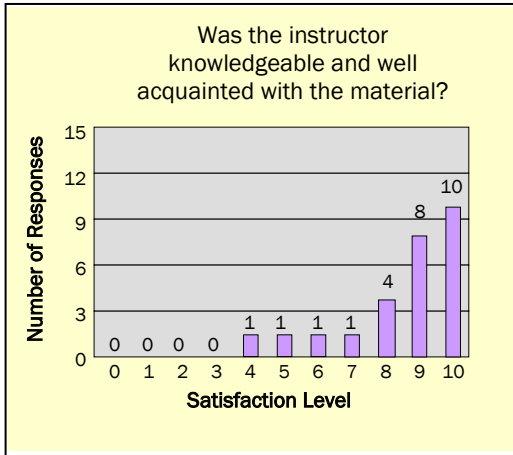
4. Survey Results

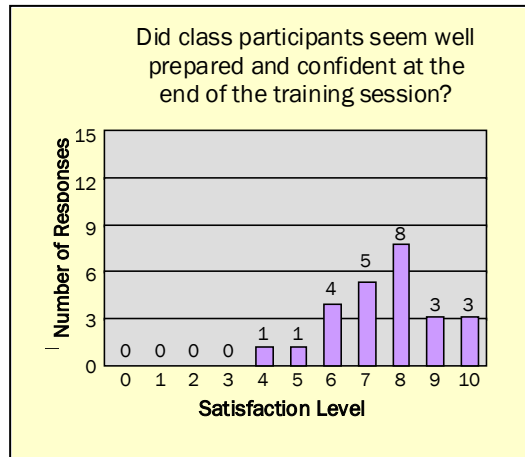
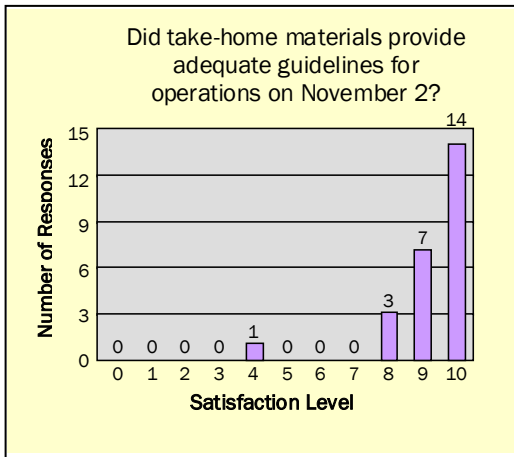
More than 900 voters were interviewed to assess their level of satisfaction and confidence in the election process. Four questions were asked of each voter, and his/her answers were marked on a scale of 1 to 10, with 10 being the most satisfactory. Each question is shown at the top of the graph frame.



4.1 Poll Worker Training

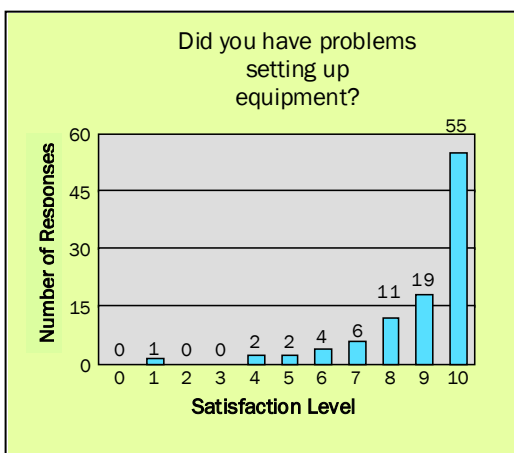
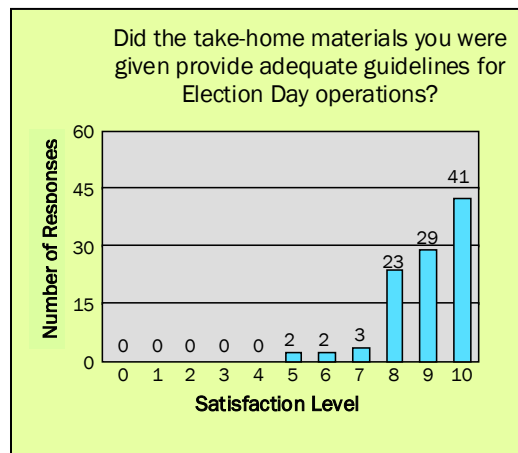
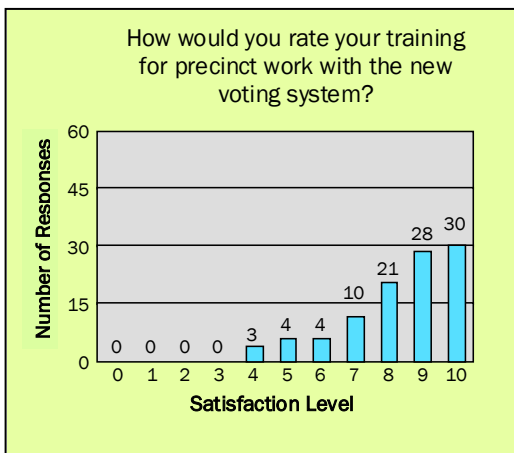
Eight questions were designed to evaluate poll worker training. These, too, were evaluated on a scale of 1 to 10 by 18 of the 19 grand jurors who took the training.

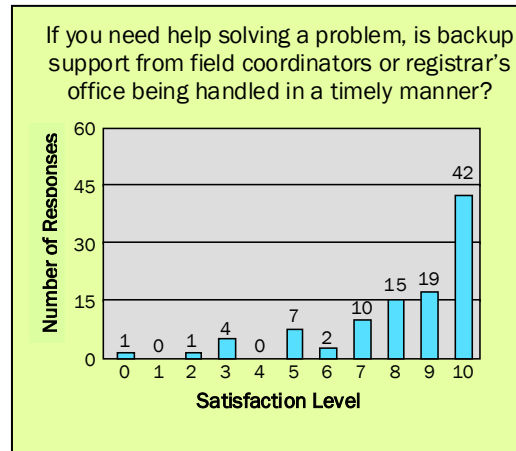
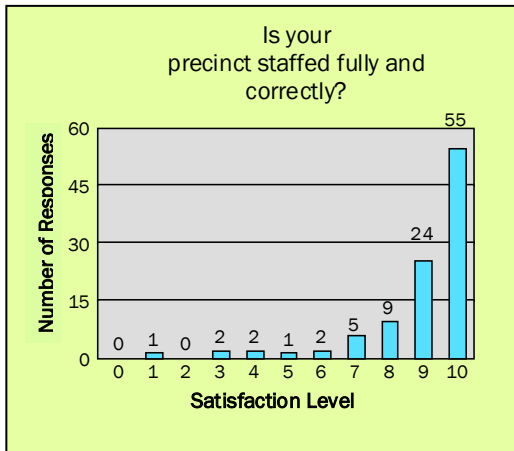




4.2 Poll Worker Evaluation

One hundred poll workers from various polling places were interviewed to assess the overall conduct of the election and the problems and difficulties they experienced. Six questions were asked; answers were rated on a scale of 1 to 10.





5. Background

Before the March 2004 primary, Orange County voters cast their ballots on the Datavote™ punch card system. The Datavote system was outmoded by the federal government's Help America Vote Act (HAVA) passed by Congress following the 2000 presidential election. HAVA required the replacement of all punch card and lever voting machines with new, certified voting equipment by January 2006. As a result, the board of supervisors authorized the ROV to replace the Datavote system with a direct record electronic (computerized) voting system and an optical scan system for absentee vote counting that would meet HAVA requirements.

On April 29, 2003, following the standard request for proposal process and public hearings, the BOS selected the Hart InterCivic eSlate™ system, as opposed to various touch screen systems, and approved a contract for the training and voter education called for by HAVA.

The contract with Hart authorized the purchase of 9,000 eSlates™ and 100 demonstration units. The registrar began receiving the equipment in August 2003. The eSlate—about the size of a legal pad—is an inch thick and weighs just 5.2 pounds. The voter uses a rotary wheel to move through the ballot and select his/her vote.



Planning and training for implementing the new system in time for the March 2004 primary were interrupted by the unscheduled statewide recall election of October 2003. This resulted in a three-month delay in putting the new system in place. Training of more than 6,000 poll workers on the new system, for example, did not get under way until February 2, 2004, only a month before the March 2, 2004, primary election.

During the March 2004 primary, voters and poll workers reported many problems. Some voters were uncomfortable with the new electronic system. Some voters got the wrong

ballot configurations. A key problem appeared to be the lack of adequate training of poll workers who could ease voters into the new system.

The November election had the potential to be a managerial nightmare fraught with possibilities for error related to:

- 1.5 million registered voters
- 7,700 poll workers
- an electronic voting system that had been used only once before in the county
- a lengthy ballot
- 2,146 consolidated precincts

Besides making choices for the presidency and a U.S. Senator on November 2, Orange County voters were asked to elect six congressmen, three state senators, nine state assemblymen, one county supervisor, seven community college trustees, 49 other school board members, 80 city councilmen, six city clerks, five city treasurers, and 35 members of various special district boards. Orange County voters also were asked to cast ballots on 16 statewide propositions and 13 local propositions.

Printed ballots covered two 8½ x 14-inch pages. They had to be made available in five languages (English, Spanish, Chinese, Vietnamese, and Korean). Further complicating the process, voters could cast ballots in a number of different ways:

- early electronic voting
- early paper ballot voting
- absentee ballot returned by mail to the registrar
- absentee ballot returned to a polling place
- paper ballot provided at the precinct
- provisional ballots (two types)
- faxed ballots submitted by overseas voters

All of this meant the ROV's office had to prepare several hundred ballot configurations based upon the jurisdictions in which voters lived.

Once again the time available for election preparations was shortened. On October 18, the last day to register to vote, the registrar's office received thousands of new voter registration forms. These had to be processed on a priority basis before other pre-election tasks, such as counting early absentee ballots.

Costs for the November 2, 2004, election were budgeted at approximately \$5 million by the ROV. Actual costs were approximately \$6 million. Some of the overrun was directed toward correcting problems encountered during the March 2004 election; however, most of the overrun was attributable to mandates that came from the state after the election budget for the county was determined. It is expected that much of the county's costs will be recovered through two sources:

- charges to cities and local districts for administering their elections and
- federal discretionary funds administered by the California Secretary of State's office.

Election Summary	Total Votes	Percent Votes Cast	Percent Registered Voters
eSlate Ballots Cast on Election Day	601,352	54.95%	40.20%
Absentee Ballots Cast	397,425	36.31%	26.57%
Provisional Ballots Counted	36,648	3.35%	2.45%
Early Ballots Cast	29,304	2.68%	1.96%
Precinct Ballots on Paper	22,459	2.05%	1.50%
Provisional Ballots Partially Counted	6,798	0.62%	0.45%
Faxed Ballots	419	0.04%	0.03%
Total Votes Cast	1,094,405	100.00%	73.16%
Total Registered Voters-Orange County	1,495,824		

Other Election Data	
Total Provisional Ballots	51,853
Provisional Ballots Not Counted	8,407
Estimated Absentee Ballots Turned in at Polling Places	50,000
Number of JBC Machines Used	2,146
Number of eSlate Machines Used	9,000
Number of People Trained as Poll Workers	7,700
Number of Consolidated Precincts	2,146
Number of Languages for Printed Ballots	5
Budget for November 2, 2004, Election	\$5,000,000
Actual Cost for November 2, 2004, Election	\$6,000,000

6. Election Observations

By the end of Election Day, 73.2% of the county’s 1,495,824 registered voters had cast ballots in one form or another. Almost 55% of those voting did so electronically on November 2. More than 36% of the voters cast absentee ballots. Only 2.05% of voters used paper ballots at Election Day polling places. Perhaps more significantly, the ROV estimates 50,000 paper absentee ballots were turned in at polling places on Election Day. (See table, “Election Summary,” above.) The grand jury’s overall observations follow:

6.1 Poll Worker Training—Observations

The training was greatly enhanced by take-home manuals, CDs, and DVDs that allowed poll workers to review the training materials.

6.2 Early Voting—Observations

- Early voting between October 5 and 29 drew 29,304 voters (2.68% of the total ballots cast), far more than the 4,800 voters who took advantage of the early voting opportunity first offered in Orange County in conjunction with the March 2004 primary election.
- Early voting is open to all voters at any early voting location regardless of precinct. Most early voters were enthusiastic about the process, returning ratings between 9 and 10 (on a scale of 1 to 10; 10 being the best). Rating composites (early voters' ratings plus November 2 voters' ratings) were close to 9 for:
 - comfort level with electronic voting
 - voting instructions
 - ease of voting electronically
 - competence and helpfulness of poll workers

See graphs, page 3.

- The grand jury was surprised and disappointed to learn that some of Orange County's foremost malls would not allow early voting polling sites on their premises.

6.3 Election Day—Observations

- Election Day voters gave electronic voting a better than 8 out of 10 rating. They rated the ease of voting electronically at 9.10, the instructions for voting electronically at 8.77, and the competence and helpfulness of poll workers at 9.19. (See graphs, page 3.)
- Voting was heavy in the early morning after polls opened at 7 a.m., but only a handful of precincts reported lines of voters as the 8 p.m. closing time approached.
- High school students recruited as student poll workers (they cannot touch ballots unless they are of voting age) were a refreshing addition to the day. They enthusiastically acted as greeters and, in many cases, helped voters to master electronic voting techniques on demonstration equipment at polling places. Some schools account for student poll workers as "on a field trip" in order to avoid financial punishment for "absent" students who actually are participating in an educational endeavor. County and city employees, as in prior elections, were a significant source of election workers.
- Some election anomalies were reported. Most were attributable to human error and only a few involved the eSlate system.
- The Judges Booth Controller (JBC) is the device essential to eSlate voting. One lead poll worker, in possession of the JBC assigned to his precinct, did not report

to work. Backup workers, including the registrar of voters and his chief deputy, rectified the situation by going to the polling place with a backup JBC.

- Unlawful electioneering was reported at four polling places. Police were called in two instances and the electioneering was halted.
- A few poll workers ignored their training and insisted on doing things their way. They were replaced by members of the “A” team—Election Day poll workers kept in reserve at the registrar’s office for such emergencies.
- Workers at one polling place could not get their voting machines up and running until they discovered it was not the machines, but rather a dead electrical outlet that was the problem.
- At another polling place, the precinct chief did not know how to use the cell phone provided for calling the registrar’s help desk. A high school student poll worker came to the rescue.
- There were complaints about not enough eSlate voting booths in some precincts.
- Election Day voting slowed when voters needed provisional paper ballots because they had lost their absentee ballots or because they were not listed on precinct rosters.
- One voter, the first at his precinct, complained he was not allowed to see the “zero balance” printout before he was ordered by the poll worker to sign the printout. (The “zero balance” printout from the JBC machine verifies to the first voter at each precinct that no votes have yet been cast at that location.)
- Many ballots on Election Day were cast by voters who came to the wrong precinct but were offered the opportunity to vote provisionally. In many cases these people were voting “out of precinct,” thus their ballots had to be counted in terms of the elections for which they were eligible. For example, a voter who lived in La Habra, but worked in Irvine, might go to a precinct in Irvine because she felt it was impossible to get home to La Habra before poll closing. But by voting in Irvine, this voter received a provisional ballot designed for Irvine, not La Habra. Because this ballot had nothing to do with local elections in La Habra, it would be counted only for those state or countywide elections for which that voter would have cast ballots had she voted in her precinct in La Habra. By not voting in the correct precinct, such provisional voters disenfranchised themselves in local elections.

6.4 Election Security—Observations

The computerized voting system is designed to be secure from outside influences (hackers) at polling places and during the counting process. At no time is the system connected to telephone lines or to the Internet. It includes three backups, and, in case of a power failure, can run on its own batteries longer than a complete voting day.

6.4.1 Security at the Polls—Observations

- The JBC records the tally at each precinct and is handed individually and under seal to the inspector assigned to each polling place. At the start of Election Day and in the presence of other poll workers, the JBC is unpacked and connected to the group of e-Slates voters will use to cast their ballots.
- Before any votes are cast, the inspector causes the JBC to generate a paper report to verify that no votes, as yet, have been cast at that precinct. This is referred to as a “zero count” slip. The inspector is required to show it to the first voter and ask that voter to sign the slip. As voting progresses during the day, the JBC records the precinct tally. In addition each eSlate station records the tally for that station, providing an additional backup count if needed.

6.4.2 Security En Route—Observations

Upon completion of the voting day, the “dumb” e-Slates are returned to their locked racks and left for later pickup. For each precinct, the inspector and a second poll worker deliver the JBC to a collection point guarded by a deputy sheriff. By way of a contract van with a sheriff’s deputy riding “shotgun,” the JBCs, along with ballots and election materials, are taken to the registrar’s office. Each van follows a predetermined route and is tracked until it reaches the registrar’s compound in Santa Ana. The tracking is done by a sheriff’s communication detail operating through telephone and radio out of a mobile unit parked within the registrar’s compound.

6.4.3 Security at the Registrar’s Office—Observations

- All JBCs and paper ballot boxes are inventoried as they arrive at the ROV facilities. Within minutes, the memory device containing vote count is extracted from each JBC. The devices are immediately inventoried and delivered to a secure tally room monitored by cameras. There, computers tabulate the votes. Only a limited number of the ROV staff has access to the computers and the secure room.
- Again, the computers used for tallying the electronic votes operate only in the secure room and are not connected to other computers, telephone lines, or the Internet. Completed Orange County tallies are sent by a separate computer system to the secretary of state’s office in Sacramento over a secure line. If, by chance, any of the tallies sent to Sacramento are compromised, the backed-up real tally is in the secure tally room of the registrar’s office.

6.5 Voter Reaction—Observations

Although indicating they voted with ease on the electronic system, a small number of voters interviewed expressed a desire for “paper backup ballots” in case any

recounts were required. They said they worried about the security of the system and, therefore, the integrity of the overall vote.

6.6 The Count—Observations

- The many ballot methods offered to voters in the November 2 general election raise questions about the county's ability to count votes in a timely and accurate manner.
- Although the electronic vote tally went quickly and smoothly during the evening of November 2 and the early morning hours of November 3, there remained large numbers of absentee and provisional ballots to verify and count. Because of the labor-intensive nature of the process, it was not completed until Wednesday, November 24, the day before Thanksgiving, or just days before the November 30 deadline for certifying the election results. In contrast, all of the votes cast electronically were counted by 2 a.m. on November 3, six hours after the polls closed on November 2.
- The ROV's office was diligent in identifying and counting all legitimate ballots. Example: The registrar's staff contacted absentee voters whose signatures on their ballots appeared to deviate from signatures on file. ROV staff made arrangements to verify the voters' identities.

7. Findings

Under Penal Code Sections 933 and 933.05, responses are required to all findings. The 2004-2005 Orange County Grand Jury has arrived at the following findings:

7.1 Poll Worker Training—Findings

7.1.1 In all but one case (reported to the ROV early in the training period), the instructors were highly competent.

7.1.2 Although the training sessions were three hours long, it was not enough time to absorb the heavily detailed election process.

7.1.3 The class sessions did not allow enough hands-on experience with the electronic voting machines, including the setting up and taking down of the machines.

7.1.4 There were no written tests that would indicate a comprehension of the materials.



▲ back

Mobile
Voting Unit
side ►



7.2 Early Voting—Findings

7.2.1 Many early voters would have been unable to vote had it not been for the early voting process because they had not applied for absentee ballots.

7.2.2 Voting at malls, city halls, supermarkets, and John Wayne Airport made early voting convenient.

7.2.3 There was not enough advance publicity about early voting.

7.2.4 The early voting period (October 5-29) was too long.

7.2.5 The mobile unit developed by the registrar's office to promote voter registration, early voting, and voting in general appears to be an effective public relations tool.

7.3 Election Day—Findings

7.3.1 There were many voting options in this election. On Election Day, voters could cast ballots electronically, by paper at the polls, by absentee ballot delivered to a polling place, or by one of two kinds of provisional ballots—blue for absentee voters who misplaced or did not receive their mailed ballots and white for voters whose names did not appear on the official roster for that precinct.

7.3.2 A small number of voters (all age groups) expressed their desire for “a paper backup ballot” in case any recounts were required.

7.3.3 A small number of people believed the instructions for electronic voting should be simplified.

7.3.4 The use of county and city employees, as well as high school students, as poll workers was effective. It lowered the average age of poll workers, an important factor in a process that typically demands 16-hour days of senior citizens, who as a group traditionally have been the major source of poll workers.

7.3.5 Substantial numbers of voters showed up at precincts other than the ones to which they were assigned.

7.4 The Count—Findings

7.4.1 The variety of paper ballots complicated the counting process. These allowed opportunities for error and a potential to weaken voter confidence. The electronic votes were tallied within hours of the polls closing, while the count of various types of paper ballots was not completed until 22 days after the election.

7.4.2 Under current state law, the county must conduct elections under statutes that are not necessarily compatible with current technology.

7.4.3 A difficulty in counting paper ballots developed because of the ballot size. The optical scanner counting the two-page ballots required that the pages be lined up exactly, or ballots would be mistakenly rejected.

7.4.4 The cost of counting electronic ballots versus the cost of counting various styles of paper ballots needs to be determined and disseminated.

Responses to Findings 7.4.2 and 7.4.4 (The Count) are required from the Board of Supervisors.

Responses to Findings 7.1.1 through 7.1.4 (Poll Worker Training), 7.2.1 through 7.2.5 (Early Voting), 7.3.1 through 7.3.5 (Election Day), and 7.4.1 through 7.4.4 (The Count) are requested from the Registrar of Voters.

8. 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 Officer of the Superior Court. Based on the findings, the 2004-2005 Orange County Grand Jury makes the following recommendations:

8.1 Poll Worker Training—Recommendations

8.1.1 The ROV should continue to seek and hire competent instructors. Additionally, more time should be given to hands-on training with the electronic voting equipment (including JBC operations), equipment setup, and equipment teardown. (See Para. 7.1, Poll Worker Training, findings 7.1.1, 7.1.2, and 7.1.3, page 12.)

8.1.2 To gauge understanding of instructions, an oral or written test should be incorporated in training. (See Para. 7.1, Poll Worker Training, finding 7.1.4, page 12.)

8.1.3 The ROV's drive to recruit poll workers from the ranks of county and city employees and high school government classes should continue in the interests of expanding the pool of younger election workers and as an educational tool for students. (See Para. 7.3, Election Day, finding 7.3.4, page 13.)

8.2 Early Voting—Recommendations

8.2.1 Early voting is off to a good start in Orange County and should be continued, although more voter education and publicity about this opportunity is necessary. (See Para. 7.2, Early Voting, findings 7.2.1 and 7.2.3, page 13.)

8.2.2 As a cost- and time-saving measure, it would be prudent to shorten the window of early voting. (See Para. 7.2, Early Voting, finding 7.2.4, page 13.)

8.2.3 Greater effort should be made to secure voting places with the most foot traffic and the best visibility. (See Para. 7.2, Early Voting, finding 7.2.2, page 13.)

8.2.4 To encourage early voting, ways should be found to take even greater advantage of the registrar's mobile unit. (See Para. 7.2, Early Voting, finding 7.2.5, page 13.)

8.3 Election Day—Recommendations

8.3.1 Precinct locations should be displayed more prominently on individual sample ballots. (See Para. 7.3, Election Day, finding 7.3.5, page 13.)

8.3.2 County election officials, including the BOS, should lobby state legislators to pass legislation that would change election day voting to the methods used in early voting, wherein there is no specific precinct. (See Para. 7.2, Election Day, findings 7.3.1 and 7.3.5, page 13.)

8.3.3 To help voters feel more secure and build trust in electronic voting, intensify voter education about Orange County's voting system, the system's security, and voter receipts (paper audit trails), prior to the next regularly scheduled general election. (See Para. 7.3, Election Day, findings 7.3.1 and 7.3.2, page 13.)

8.3.4 Voter instruction sheets for casting electronic ballots should be simplified (less verbiage). (See Para. 7.3, Election Day, finding 7.3.3, page 13.)

8.4 The Count—Recommendations

8.4.1 The registrar of voters and the board of supervisors' subcommittee on elections should seek, with the county's representatives in the state Legislature, counting efficiencies that more closely match the capabilities of electronic voting. (See Para. 7.4, The Count, findings 7.4.1, page 13, and 7.4.2, page 14.)

8.4.2 The ROV should publish a comparison of the cost of counting electronic ballots versus the cost of counting paper ballots. (See Para. 7.4, The Count, finding 7.4.4, page 14.)

8.4.3 County election officials should explore the possibility of combining the various voting methods used in the November 2nd election. (See Para. 7.3, Election Day, finding 7.3.1, page 13; and Para. 7.4, The Count, finding 7.4.2, page 14.)

8.4.4 The ROV should address mechanical difficulties encountered in processing paper ballots. (See Para. 7.4, The Count, finding 7.4.3, page 14.)

Responses to Recommendations 8.1.3 (Poll Worker Training); 8.3.2 (Election Day); and 8.4.1, 8.4.2, and 8.4.3 (The Count) are required from the Board of Supervisors.

Responses to Recommendations 8.1.1 through 8.1.3 (Poll Worker Training), 8.2.1 through 8.2.4 (Early Voting), 8.3.1 through 8.3.4 (Election Day), and 8.4.1 through 8.4.4 (The Count) are requested from the Registrar of Voters.

9. Commendation

To the management and staff of Orange County's Registrar of Voters Office and to the thousands of temporary workers recruited to conduct the November 2, 2004, general election, the Orange County Grand Jury 2004-2005 confers high praise for a job well done.

10. Bibliography

- State of California Elections Code
- "Identification of 2004 March Primary Election Issues," Orange County Board of Supervisors Subcommittee on Elections, May 18, 2004.