


Memorandum

To: Honorable Ross Mirkarimi, Member, Board of Supervisors

From: John Arntz, Director of Elections 

Date: March 7, 2006

RE: Update #3: Implementation of New Voting System for June 6, 2006 Election and the Implementation of Ranked-Choice Voting for the November 7, 2006 Election

This memo provides an update on the status of certification for Sequoia Voting Systems and addresses the concerns that members of the Rules Committee discussed during the February 16th hearing regarding the certification status of the Sequoia's voting system.

Among the issues raised during the hearing was: 1, whether the Secretary of State would certify Sequoia's system; 2, if the timing of the certification would allow for implementation of the system for the June primary; 3, whether the Sequoia system met state requirements regarding the voter verified paper audit trail (VVPAI); 4, whether the system met federal requirements related to accessibility; 5, whether the public had an opportunity to comment on the voting system during the competitive bid process; 6, Sequoia's ability to develop and have certified a ranked-choice voting solution for the November 2006 election; 7, whether valid concerns existed related to ownership of Sequoia from Venezuela that could adversely impact Sequoia's operation; 8, whether the Department of Elections properly administered the selection process; 9, whether the Department can develop a backup plan if the Secretary of State did not certify Sequoia's system for use in the June 2006 election; and 10, whether the Department can develop a backup plan if Sequoia was unable to develop and have certified a ranked-choice voting solution for the November 2006 election. I will address these issues in that order.

EXECUTIVE SUMMARY

Although the Department and Sequoia have concluded contract negotiations for the implementation of a new voting system in time for the June 6, 2006 primary election, the contract itself has not been approved by the Board of Supervisors. In light of recent developments, I plan to extend Elections Systems & Software's (ES&S) current contract with the City so that ES&S can conduct the June primary election, and, possibly, the general election in November. The Sequoia contract requires Sequoia to obtain certification from the Secretary of State for the inclusion of a ranked-choice component to the voting system. The new system will consist of one optical scan tabulator at each polling place similar to the

previous optical scan tabulators called "Eagles" that were staged in each polling place. As in the past, voters will vote on paper ballots at the polling places and place these ballots into the optical scan tabulators. For those voters with specific needs, and to meet federal accessibility requirements that allow people with disabilities to vote independently and privately, each polling place will include one touch screen unit. For voters requiring language assistance, the touch screens will display ballot information and the voter verified paper audit trail (VVPAT) in Chinese characters and in Spanish. The touch screens will have an audio component that includes Chinese and Spanish, and will include a VVPAT. San Francisco will continue to mail absentee ballots to all voters requesting such service and these ballots will look nearly identical to the paper absentee ballots used in the City since 2000.

The contract requires Sequoia to provide the City with backup plans for both the June and November elections should Sequoia not receive certification for its system from the Secretary of State, or, if the system fails to properly tabulate votes. Sequoia would pay the costs of any backup plan implemented for the June and November elections. For the November election that will include ranked-choice voting (RCV), if Sequoia were not able to deliver a statement of vote within the required 28 days, the City would assess liquidated damages up to \$3 million.

Sequoia's system most likely will receive certification from the Secretary of State no later than the end of March 2006. Thus, the issue of whether the Sequoia system will be certified for use in June is not the primary concern for the Department. The overriding issue is the amount of preparations Sequoia is able to undertake without having a contract approved by the Board of Supervisors. At this point in time, unless Sequoia is able to commit extensive resources to San Francisco, the implementation of a new Sequoia system would overly burden the Department's personnel in its preparations for the June election.

My recommendation is for the City to extend its contract with ES&S from April 15, 2006 through December 2006 and to incorporate ES&S' accessible voting equipment that the Secretary of State has certified for use in California with the City's current voting system for the June primary, and possibly, for the November general election. This approach will be burdensome, however, since the Department must treat the accessible voting equipment as an entirely separate voting system to the current equipment. The reason is ES&S' accessible equipment, while certified for use in California, it is not certified for use with the City's existing equipment. Thus, all operations of the two systems must be independent of one another, including the tallying of votes.

Further, the contract extension must require ES&S to immediately submit an application to the Secretary of State to have ES&S' RCV program approved for use this November. Simultaneously, the City would complete the contracting process with Sequoia so it can complete its RCV solution and submit an application for certification to the Secretary of State. This approach will greatly increase San Francisco's ability to conduct RCV in November when considering that no RCV system is presently certified. ES&S' RCV system is based on technology that will never meet present-day testing standards and the City cannot assume that

ES&S will automatically receive the Secretary of State's approval for November 2006. Sequoia's system is based on up-to-date testing standards and has recently completed the Secretary of State's certification testing process. While the City will have two vendors under contract, this approach maximizes San Francisco's ability to continue without interruption in its ability to conduct RCV elections.

1. STATUS OF CERTIFICATION OF THE SEQUOIA SYSTEM

Two steps remain for Sequoia's system to be certified for the June primary: approval by the National Association of State Election Directors (NASIED) committee and certification by the Secretary of State. The NASIED committee is comprised of three members who review the report by the independent testing authority. After reviewing the report, the committee members determine whether the testing authority followed protocols and properly assessed the voting system. Two of the three NASIED committee members already reviewed the Sequoia system as consultants to the Secretary of State's office, and in their capacity as consultants, already recommended the Sequoia system for certification. The issuance of the NASIED number is expected to occur in mid-March. The Secretary of State may certify Sequoia's system once they receive the NASIED number. Staff from the Secretary of State's Office of Technical Assessment has already recommended certification of Sequoia's system for the June primary.

As I noted in my February 10th memo on the topic of Sequoia's certification, the independent testing authority completed its code review of Sequoia's voting system according to federal testing standards. Although the voting equipment has been used nationwide in previous elections, Sequoia sought new certification for its system because the vendor updated its software to meet more stringent functional requirements, and to incorporate character-based languages such as Chinese into the company's touch screen units.

The federal standards under which the testing authority reviewed Sequoia's system were established by the Federal Elections Commission in 2002 and approved by the Elections Assistance Commission in 2005 as the standard requirements for all new voting systems. On January 31st, the testing authority recommended to the Secretary of State that he certify the Sequoia system.

On Friday, February 24, 2006, the Secretary of State's office issued its staff report regarding the certification testing and review of the "procedures, hardware, firmware, and software developed by Sequoia Voting Systems." The report recommends to the Secretary of State that he certify the Sequoia system for use in California. The Secretary of State's website for all information related to certification is http://www.ss.ca.gov/elections/elections_vs.htm.

On March 1st, the Secretary of State held a public hearing regarding the proposed certification of the Sequoia system and three other voting systems. Not before seven days after this certification hearing may the Secretary certify a voting system.

Coincidentally, February 27th was the first time Illinois election law authorized early voting in that state. The largest jurisdiction, Chicago, has successfully implemented 210 Sequoia touch screens, 10 units in each of the city's 21 early voting sites. Chicago uses the identical Sequoia voting system that San Francisco planned to use in the June primary.

2. WHETHER SUFFICIENT TIMING EXISTS TO IMPLEMENT THE SEQUOIA SYSTEM FOR THE JUNE 6, 2006 ELECTION

The Department and Sequoia recently completed contract negotiations to implement the new system in San Francisco. The contract includes a project schedule for critical tasks to take place by specific days. For any missed critical milestones, the contract stipulates that Sequoia will pay liquidated damages to the City until Sequoia completes the work necessary to remedy the situation. No critical milestone will take place prior to the execution of the contract. Still, Sequoia recognizes that successful elections require early and continual planning and has cooperated with the Department in preparing for the June election. Sequoia has provided materials and has assigned personnel to prepare for the implementation of the system. Sequoia's dedication of resources and personnel includes the company's development of a ranked-choice voting (RCV) solution for San Francisco.

The challenge for implementing the new system for June is having the opportunity to create training and informational materials specific to Sequoia's system. Sequoia's Project Manager is now working full-time with the Department to develop materials for training, outreach, and media communications. Sequoia delivered one touch screen unit and one optical scan unit to the Department so that Department personnel can familiarize themselves with the new technology and prepare themselves for assisting voters.

The Department's Outreach division has begun scheduling presentations and already has been working with a graphics artist assigned to the Department by Sequoia to produce brochures and other materials related to the new system. This division has also contacted community groups and is organizing a media "kick-off" event for March 29th to begin the voter education process in San Francisco. Also, the contract stipulates that Sequoia join the Department's Outreach staff in conducting 22 presentations, two presentations in each of the 11 Supervisorial districts and the Department has begun to organize these events.

3. VOTER VERIFIED PAPER AUDIT TRAIL

State elections law requires all voting equipment to incorporate a voter verified paper audit trail (VVPAT) for all elections after January 1, 2006. All of Sequoia's touch screen units will include the VVPAT as was demonstrated during the two-week pilot program here in August 2005. Sequoia's touch screens have the capability to print the paper audit trail in Spanish and Chinese characters. Sequoia provided touch screens with the paper audit trail for the November 2004 election in the state of Nevada. The equipment operated successfully and is essentially the system that just completed federal and state review for use in California.

Voters must approve the information printed on the VVPAT before the system will record votes. Upon reviewing the information on the VVPAT, voters can reject their choices and

vote again. Voters will have three opportunities to accept or reject their selections as they are printed on the VVPAT. Finally, after an election the Department will follow state law and will use the VVPAT to manually count results from 1% of San Francisco's precincts and then compare the results from the manual count to the results recorded on the touch screens' memory devices. This allows the Department to ensure the touch screens accurately recorded votes.

Since the optical scan system is comprised of paper ballots, it meets the state's paper trail requirements. The ballots for the new optical scanners will appear nearly identical to the ballots San Francisco voters have used since 2000 and will continue to present ballot information in English, Chinese, and Spanish.

4. ACCESSIBILITY

Under the federal Help America Vote Act (HAVA) all polling places must include voting equipment that is accessible to people with disabilities and allows them to vote independently and privately. This is the first year that all polling places must meet such accessibility requirements. To comply with federal law, San Francisco must add one touch screen unit in each polling place since the optical scan tabulators are not wholly accessible.

During the pilot program the Sequoia touch screen system demonstrated features that allow people with specific needs to vote independently and privately. These features include the audio presentation of ballot information in English, Spanish, or Chinese, the visual presentation of ballot text in English, Spanish, and Chinese, the ability to navigate the ballot using Braille, the enlargement of text, the capacity to navigate the ballot using a keyboard, and the capacity to allow voters to use sip-puff devices to navigate the ballot.

5. PUBLIC INPUT

During the pilot program, the Department made every effort to encourage public input on the two systems under review. The Department prominently announced the pilot program on its website, issued press releases, contacted over 250 community groups included in our Outreach database, sent invitations to all elected officials, announced the pilot program at Elections Commission meetings, and invited members who were present at the Voter Outreach and Education Advisory Committee forums (VOEAC) held in July and August 2005; the VOEAC agenda for the August forum provided time for each organization member to go to the lobby area and try out each system and complete surveys. I also met personally with Supervisors, the Mayor, and their respective staff members to inform them of the scheduled pilot program.

Over 400 people attended the pilot program and submitted evaluations of the systems. Specifically, the Department invited and scheduled review of the systems by members of the Rose Resnick Lighthouse for the Blind and Visually Impaired, the ARC of San Francisco, the American Foundation for the Blind, the Voting Accessibility Advisory Committee that works with the Department on accessibility issues related to voting equipment, and the Mayor's Office on Disability. Additionally, nationally recognized experts on usability reviewed the systems and discussed ideas with both vendors on how to improve the equipment: the

President and CEO of Sequoia spent over an hour with myself and a usability expert on Sequoia's systems. Public comments and surveys were shared with the Selection Panel.

6. SEQUOIA'S ABILITY TO IMPLEMENT RANKED-CHOICE VOTING FOR THE NOVEMBER 7, 2006 ELECTION

The Department and Sequoia met on February 21st to discuss the development and implementation of ranked-choice voting (RCV). Present at that meeting for Sequoia were the Project Manager for San Francisco, the Assistant Project Manager, and one of Sequoia's chief software developers who is organizing the company's resources for implementing RCV in San Francisco. On March 1st, Sequoia planned an internal meeting to assign personnel to tasks related to RCV. The Department and Sequoia met again to review Sequoia's progress on the company's development of RCV and will provide information to Sequoia next week so the vendor can resume coding RCV.

Sequoia has assigned five software developers to complete the RCV software and firmware, test them, and ready these components for federal and state review. The basis of the current programming remains the module Sequoia designed for the pilot program held for two weeks in August 2005 outside the Department's offices. During the pilot program, Sequoia successfully demonstrated RCV on its touch screens and on its central count tabulators used for counting absentee ballots. Sequoia wanted to finalize the design requirements for RCV before adding firmware to the optical scan units that will be placed in each polling place. The touch screens and the absentee ballot tabulators that were used for the pilot program recorded votes for RCV contests, accumulated those votes, and tabulated the votes using the RCV method. The primary work left to complete for RCV relates to the system being able to provide the necessary results reporting for RCV contests.

Sequoia has reserved time with an independent testing authority for review of Sequoia's system with the RCV components in place that is able to conduct RCV elections. Sequoia plans to submit an RCV system to the testing authority in mid-May. I have contacted the Secretary of State's office several times indicating that Sequoia will be submitting a RCV-capable system for the Secretary of State's office to review and certify for use in San Francisco. After Sequoia receives certification for its RCV solution, it will become the second vendor in California with a certified system capable of conducting RCV elections. In recognition of the City's leadership in promoting the development of systems able to provide RCV contests, the Sequoia contract states that the City will receive a \$200,000 credit to the contract price when Sequoia provides RCV to another public or private entity. There is a high likelihood that San Francisco will receive this credit since Santa Clara County, requires RCV elections to take place when a RCV system becomes available and other jurisdictions are considering the implementation of RCV. Sequoia is also the vendor for Santa Clara County.

7. SEQUOIA'S OWNERSHIP STRUCTURE

At the Rules Committee hearing, some questions were raised regarding the nationality of shareholders of the holding company that recently acquired Sequoia. Before Sequoia submitted its bid in response to the request for proposals that the Department issued on March 31, 2005, Smartmatic Corporation purchased Sequoia from De La Rue, Inc. Two principal shareholders of Smartmatic Corporation are Venezuelan citizens. The shareholders did stage voting equipment nationwide for a recent presidential referendum in that country. Sequoia is a registered company in Delaware and its main operations office remains in Oakland, California.

8. THE SELECTION PROCESS

Under the general guidelines of the City's Request for Proposals (RFP) process, the Department convened a panel of four persons to review all bids and related materials associated with the RFP in order to make a recommendation to the Director on the selection of the new voting system. The Human Right Commission suggested the panel consist of persons with technological expertise and election experience and ultimately approved the composition of the panel. The final composition of the panel included two members with years of technological background experience: one member from with more than 25 years experience in computers and technology, who has assisted the Department during the conduct of elections for approximately seven years, and one member with a technological background who has worked with the Department during the conduct of elections since the early 1990's; another panel member with 15 years of computer and technology background, with direct elections experience during the 2004 Presidential Election and the City's implementation of ranked-choice voting, and one panel member with 10 years of election administration experience.

The panel members independently scored the systems. In making their decisions they reviewed the vendors' bids, observed the systems during the pilot program, reviewed references from elections departments in other counties, and reviewed the surveys completed by voters during the pilot program. When the panel members submitted their final scores, they were unaware of the other panel members' scores. The scores from the four panel members were combined, and then divided by four to determine the final average score of the two systems.

BACK-UP PLANS

Since the Secretary of State's staff has recommended that he certify Sequoia's system, it is highly likely that the Sequoia system will be ready for use in San Francisco this June. In the contract, Sequoia agreed to develop contingency plans for both the June and November elections and these plans are not limited to hand counting ballots, although a manual process may be the most feasible contingency plan. Sequoia agreed to complete this contingency plan before May 1st for the June election and before May 14th for November. The contract also requires Sequoia to cover the costs if the implementation of the contingency plan, including any hand-count, and, that the counting of ballots will be completed within the 28 days necessary to certify the election. If Sequoia is unable to implement a plan that results in a

statement of vote within 28 days, the City can assess liquidated damages for up to \$3 million. The contract also requires Sequoia to carry a performance bond for both the June and November elections equal to \$4 million, and a labor and materials bond equal to \$1 million for the duration of the contract. Thus, the contract creates incentives for Sequoia to provide the City with a certified system for June, and includes consequences for the company if it does not have a certified system in place and operating properly.

At the February 16th Rules Committee hearing, the Department did agree to develop a back-up plan should the Secretary of State decide to not certify Sequoia's system in time for use in June 6, 2006 primary. Also, the Department agreed to present a back-up plan for the November 7, 2006 general election in case Sequoia was unable to develop and have certified a RC'V solution.

9. June 6, 2006 Election

In a memo I issued on February 10th I mentioned the possibility of San Francisco conducting an all-mail ballot election for the June primary. To conduct an all-mail ballot election with contests for state and federal offices, the State Legislature would need to pass legislation allowing counties to conduct an mail-ballot election, and the Governor sign such legislation. Recently introduced, Assembly Bill (AB) 707 will allow counties to conduct all-mail elections. However, a committee hearing was canceled last week and a new hearing date has not been scheduled. Passage would require a two-thirds vote in both the Senate and the Assembly for urgent legislation to take effect immediately.

As we move closer to June without knowing whether such legislation will pass, an all-mail-ballot election becomes more problematic. The Department's planning and preparations presently include voting taking place in polling places. If the AB 707 were approved, the Board of Supervisors would then need to authorize the Department to conduct an all-mail-ballot election. Already for the June election, the Department will prepare approximately 120,000 absentee ballots for mailing one month before the election to the voters registered as permanent absentee voters. To transition to an all mail-ballot election, the Department would need to prepare additional resources and staffing to handle an additional 300,000 absentee ballots for mailing to the more than 420,000 registered San Francisco voters. To meet this challenge, the Department would require a significant increase in personnel and computer equipment. Although the likelihood of AB 707 becoming law in a timely manner is unknown, the Department has considered the challenges of conducting an all-mail-ballot election for June.

As I also mentioned in the February 10th memo, one potential back-up plan would be for the City to use the services of our vendor from previous elections, ES&S, and use the old precinct-based optical scan equipment (Eagles). To meet the new federal accessibility requirements under the Help America Vote Act (HAVA), ES&S would need to provide additional equipment. ES&S has a product called the AutoMARK that is certified for use in California and meets the federal accessibility requirements. The AutoMARK is a hybrid system with characteristics of both touch screens and optical scan equipment. Voters place a

ballot card into the AutoMARK, but then use a "touch screen" that displays the ballot information, mark their choices by pressing on the appropriate place on the screen, and after the voters accept their selections, the AutoMARK will ink the voters' choices on the ballots. The final step is for voters to take the ballot cards from the AutoMARK and place them into the optical scan tabulators located at the polling places. After voters complete their selections, the AutoMARK then prints the selections on the ballot cards. The cards are removed from the AutoMARK, and then usually they are fed into the optical scan units at the polling place. The AutoMARK itself never registers any votes. The AutoMARK, however, is not certified by the Secretary of State for use with the Eagles and ES&S would need to submit an application to the Secretary of State seeking certification to combine the operation of the two systems.

The City could still use the Eagles with the AutoMARK without certification from the Secretary of State. If the Department were to deploy the Eagles and AutoMARKs as two separate voting systems, the operation of the equipment would not violate any state laws or procedures related to certification. To implement the two systems, the Department will need to print two types of ballots for the polling places: one set for use with the Eagles, and one set for use with the AutoMARK. The reason for having two different types of ballots for the same election is that the AutoMARK does not use the same card as do the Eagles. This means that every time voters use AutoMARKs, those ballot cards must be kept completely separate from the ballots used with the Eagles. After the polls close, the Department would transport to City Hall the cards completed by the AutoMARK. Since the AutoMARK ballots have not been counted, the Department will need to process these cards in City Hall to record voters' selections. The processing of these cards must take place on equipment that is not connected in any way to the equipment or servers the Department has used for the past several years to record and process votes. Finally, the pollworkers will be unable to post election-day results outside polling places for ballots marked using the AutoMARK since the AutoMARK does not tabulate votes and there are no results to be posted at this time.

The Department requested that ES&S provide a written proposal for using the Department's existing optical scan equipment and provide information on the costs and timetable for the City to incorporate the AutoMARK into the June election. It is important to note that ES&S indicated that it will not lease the AutoMARKs to the City and requires the City to purchase this equipment. An initial cost estimate from ES&S is approximately \$3.5 million for San Francisco to purchase and install the AutoMARKs. This cost estimate excludes any other services ES&S would need to provide in connecting with the election.

ES&S is under contract with the City to provide election services through April 15, 2006. The City will extend the contract with ES&S and include the purchase of approximately 600 AutoMARKs in the extension. Since \$3.5 million is nearly a 50% increase of the original contract, the Department may need to receive authorization from certain City departments before executing the contract with ES&S. After approval from these departments, the Department and ES&S would need to negotiate the terms of such a contract extension. Previously, when the City and ES&S negotiated a contract extension, the negotiation process lasted several months. Indeed, the contract negotiations with Sequoia took nearly three

months to complete. ES&S and the City would have six weeks to complete discussions to extend the existing contract with conditions agreeable to both parties.

The Department would also seek Board approval for accept and expend resolutions so that Department can secure state and federal grant monies to fund the contract extension. The City is eligible for more than \$9 million of state and federal grant monies to fund the upgrading to newer voting technologies. If the City does not seek the grant monies, the funding source would need to be the General Fund. However, any grant monies earmarked for funding a contract extension with ES&S will reduce the grant monies available to fund the contract with Sequoia.

Finally, similar to having to implement a new Sequoia system, the implementation of the AutoMARKs will require the Department to learn the new technology, and then educate pollworkers and voters on the use of the new machines. Also, the AutoMARKs will increase the amount of pre-election testing that the Department requires from its voting equipment.

10. November 7, 2006 Election

Even if the all-mail ballot option discussed earlier is passed by the Legislature and signed by the Governor for the June election, the authority for counties to conduct such elections for November is not included in the legislation. If the legislation did allow for a mail-ballot election for November, the Department would still need a RCV-capable system to record RCV votes and tabulate them using the RCV method.

The contract between the City and Sequoia requires Sequoia to submit a RCV program to a testing authority no later than May 30th. Sequoia has reserved time in mid-May with the testing authority to being the certification process. I mentioned earlier the resources that Sequoia is committing to its development of RCV, but if Sequoia does not meet the May 30th deadline, the Department proposes to begin good-faith negotiations with ES&S to conduct the November election as long as ES&S has already submitted its RCV system to the Secretary of State for certification for the November 2006 election. In other words, any contract extension with ES&S must require the company to immediately submit an application to the Secretary of State for review of ES&S' RCV system. If that system is not already under review by May 30th, the City will determine if ES&S is a viable option for November.

Although ES&S did receive conditional certification to run RCV on the Eagles and absentee ballot optical scanners to conduct RCV election in 2004 and 2005, that conditional certification has expired. To use the old system for November 2006, the Secretary of State will again need to review and then certify ES&S' RCV system for RCV. Since the Eagles are older technology that will never meet new testing requirements, the City cannot assume that ES&S will receive certification.

When considering back-up options for November 2006, Sequoia's voting system remains a viable choice. Sequoia is actively finalizing its RCV program and will submit this program in mid-May with an independent testing authority. The Sequoia equipment has already successfully completed testing under the new requirements and represents the latest technology that will incorporate a RCV solution in its operations.

I hope this memo addresses the concerns that have been raised. I am available to meet with you and your staff to discuss these issues and very much look forward to successful elections in June and November and thereafter. Please contact me with any questions you may have.

J.P.A.

Cc: Honorable Gavin Newsom, Mayor
Honorable Members, Board of Supervisors
Dennis Herrera, City Attorney
Ed Harrington, Controller
Steve Kawa, Chief of Staff, Mayor's Office
Noelle Simmons, Budget Director, Mayor's Office
Honorable Members, San Francisco Elections Commission