

April 24, 2007

The Honorable Debra Bowen
Secretary of State
1500 11th Street, 6th Floor
Sacramento, CA 95814

Via First Class Mail and EMail: votingsystems@sos.ca.gov

Re: Response to Request for Submission of Working Models and Source Code

Dear Madame Secretary,

Thank you for your courtesy and professionalism in providing us with the opportunity to comment on California's Top-to-Bottom Review of Election Voting Systems Certified for use in California elections. ES&S appreciates this opportunity to offer our input on the review process in accordance with the State's goal of better understanding the security, accuracy, and reliability of the voting systems in use in California today. We have reviewed the proposed guidelines and have comments for your consideration in three general areas. We are seeking further clarification from your Office and would welcome the opportunity to address any questions you may have from our remarks. The three general areas are **cost, requirements, testing and confidentiality**.

Costs

Paragraph 11a.3, states, "vendor to pay for any reasonable cost associated with the review of the source code of any software or firmware," ES&S respectfully requests that prior to the execution of the Agreements between the California Secretary of State and Election Systems & Software, Inc., ES&S be given the opportunity to review and approve the estimated cost of such review. This will allow ES&S to effectively budget for the cost of this review and advise our customers of any potential additional costs that may be passed on to them.

In addition to requesting the estimated cost for the proposed review, ES&S respectfully requests clarification as to all aspects of the review process. This is essential for ES&S to move forward and should include at minimum the following:

- Plan for the Top-To-Bottom Review including tasks, resources, and schedule
- Anticipated/required ES&S support including tasks, timeframes, number of hours, and expertise level needed

- Fee structure for any State employees, and/or contracted examiners acting as agents to the State to be involved in the review, and associated testing fees
- Total proposed costs for the Top-To-Bottom Review of ES&S systems

Requirements

Under *DRAFT CRITERIA*, it is stated that the qualified reviewers selected by the Secretary will evaluate compliance with the mandatory provisions of the Elections Code, voluntary federal voting system standards as incorporated into California law by the Elections Code, and other applicable requirements imposed by state and federal law, including, but not limited to, Article II, Sections 2.5 and 7 of the California Constitution.

ES&S respectfully requests clarification as to all aspects of the testing process. This is essential for ES&S to move forward and should include at a minimum the following:

- **Test Plans:**
 - Specific test criteria
 - Pass/Fail criteria
 - Identification of new vs. current certification requirements
 - Plans for test environment control
- **Voting System Standards and New Requirements**

Voting systems certified for use today in the State of California were NASED qualified and State certified to the 1990 and 2002 Voting Systems Standards and California Elections Code at the time of certification. We would like to understand if the State is introducing new and additional requirements and criteria for certification that was not previously required for certification approval. If so, please provide ES&S with such new requirements.
- **Source Code**

As stated in *Section 1. SECURITY, 2. Security Testing, b. Source Code Review*, the objective of the source code review is to identify anything in the code that could be used maliciously to interfere with the accurate recording of the votes or to alter the record of votes to change the result of an election, please clarify the following with respect to the source code review:

 - Standards and methodology to be used in the source code review
 - Specific criteria pass/fail criteria
 - Which components of the voting system will undergo code review? Is the review targeted to the source code that supports ballot presentation, vote capture, vote data storage and collection? Is the review of source code that is not involved in these functions considered outside the scope of this source code review?

Testing Process and Confidentiality

ES&S recognizes that portions of the California Secretary of State's Top-To-Bottom review findings will become public record upon release of the reports. It is our understanding the reports will not disclose any portion of the vendor's systems that are considered proprietary and confidential including such information that may be

considered a trade secret. In addition, all reviewers will be obligated to keep all ES&S information confidential and will be prohibited from disclosing any information obtained from their review of the ES&S voting systems. ES&S requests the Secretary to consider the following:

- Opportunity for vendor to review the findings reports solely for the purpose of verifying that it contains no misstatements of fact, proprietary or confidential information or trade secrets prior to their public release, as we are certain the State can appreciate public dissemination of confidential and trade secret information can result in immediate and irreparable harm to the vendor.
- Upon review of the "Agreement", Attachment "A", provisions prohibiting the California Top-To-Bottom Review team and agents acting in the State's behalf, from making or releasing any public comments regarding the review findings are absent. What limits will be put into place on public disclosure of source code, source code review results and how will this be enforced during the review process? There is a need for controlling such information to maintain public confidence in the voting systems. ES&S respectfully requests the Secretary of State revise the proposed Confidentiality Agreements to incorporate the points set forth in this letter specifically with restricting the disclosure of ES&S proprietary and confidential information including trade secrets by the examiners reviewing the voting systems. ES&S will provide any assistance necessary to ensure that such requirements are incorporated into the Confidentiality Agreements.
- It is our assumption the source code review is a search for conclusive evidence of software errors that can directly affect election results, and for conclusive evidence of software that has fraudulent intent. The source code review should not be a search for "possible vulnerabilities" supported by theoretical and/or hypothetical scenarios that are unlikely or not possible under normal election procedures. Please confirm that if no conclusive evidence is found, we are safe to assume statements of theoretical and hypothetical nature will be suppressed.
- In addition, please confirm that all analysis will be conducted, reports (preliminary or final) written, and any conclusions drawn be based upon the following foundational basis and underlying assumptions:
 - Physical security of all voting system equipment and materials is and has been maintained.
 - Physical chain of custody for all materials and equipment has not been broken or compromised.
 - Best election system administration practices and procedures have been used.
- Provide a list and backgrounds of the "qualified industry and academic experts in computer and software security, and experts in electronic voting systems that are to be engaged in both types of tests

The California Secretary of State's Office will begin a review of all electronic voting systems "currently in use." ES&S offers the following response:

ES&S is continually implementing and certifying enhancements to our system for improving the accuracy and security of our systems. As such, it is our intent to resubmit our application for Unity 3.0.1.1, (previously State tested in September 2006), as an

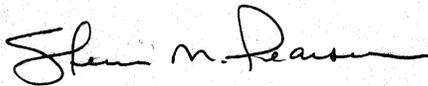
independent unit with the currently certified and in use AutoMARK version 1.0 as a stand-alone device. Both of these components have been NASED certified and are state certified and effectively used in multiple states today. We believe it would be in the best interest of our customers to have the most updated version of our voting system certified versus a review of the current Unity 2.4.3 system in place today. Once certified by the State, it will be ES&S' intent to deploy these updated product releases as soon as possible and for use in the upcoming California elections in 2007 and 2008.

Per your request, ES&S will be forwarding to your office a working model of all hardware currently in use. The TDP and all associated documentation for Unity 3.0.1.1 and AutoMARK remain the same as originally submitted and can be referenced via the States files. All firmware and software, including source code, shall be made available upon ES&S acknowledgement of the requests cited within this letter.

ES&S is concerned regarding the timing, criteria for review, and fiscal implications involved with this undertaking. We encourage you to take all of the Public input received under consideration when finalizing your Top to Bottom review.

Thank you in advance for your consideration of our comments and input.

Sincerely,

A handwritten signature in black ink, appearing to read "Steven M. Pearson". The signature is fluid and cursive, with a long horizontal stroke at the end.

Steven M. Pearson
Vice President, Certification
(402) 970-1225
smpearson@essvote.com

April 25, 2007

The Honorable Debra Bowen
Secretary of State
1500 11th Street, 6th Floor
Sacramento, CA 95814

Via First Class Mail and EMail: votingsystems@sos.ca.gov

**Re: Response to Request for Submission of Working Models and Source Code -
ES&S InkaVote System**

Dear Madame Secretary,

Thank you for your courtesy and professionalism in providing us with the opportunity to comment on California's Top-to-Bottom Review of Election Voting Systems Certified for use in California elections. ES&S appreciates this opportunity to offer our input on the review process in accordance with the State's goal of better understanding the security, accuracy, and reliability of the voting systems in use in California today. We have reviewed the proposed guidelines and have comments for your consideration in three general areas. We are seeking further clarification from your Office and would welcome the opportunity to address any questions you may have from our remarks. The three general areas are **cost, requirements, testing and confidentiality**.

Costs

Paragraph II.a.3, states, "vendor to pay for any reasonable cost associated with the review of the source code of any software or firmware," ES&S respectfully requests that prior to the execution of the Agreements between the California Secretary of State and Election Systems & Software, Inc., ES&S be given the opportunity to review and approve the estimated cost of such review. This will allow ES&S to effectively budget for the cost of this review and advise our customers of any potential additional costs that may be passed on to them.

In addition to requesting the estimated cost for the proposed review, ES&S respectfully requests clarification as to all aspects of the review process. This is essential for ES&S to move forward and should include at minimum the following:

- Plan for the Top-To-Bottom Review including tasks, resources, and schedule
- Anticipated/required ES&S support including tasks, timeframes, number of hours, and expertise level needed

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- Total proposed costs for the Top-To-Bottom Review of ES&S systems

Requirements

Under *DRAFT CRITERIA*, it is stated that the qualified reviewers selected by the Secretary will evaluate compliance with the mandatory provisions of the Elections Code, voluntary federal voting system standards as incorporated into California law by the Elections Code, and other applicable requirements imposed by state and federal law, including, but not limited to, Article II, Sections 2.5 and 7 of the California Constitution.

ES&S respectfully requests clarification as to all aspects of the testing process. This is essential for ES&S to move forward and should include at a minimum the following:

- **Test Plans:**
 - Specific test criteria
 - Pass/Fail criteria
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- **Voting System Standards and New Requirements**

Voting systems certified for use today in the State of California were NASED qualified and State certified to the 1990 and 2002 Voting Systems Standards and California Elections Code at the time of certification. We would like to understand if the State is introducing new and additional requirements and criteria for certification that was not previously required for certification approval. If so, please provide ES&S with such new requirements.
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Testing Process and Confidentiality

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considered a trade secret. In addition, all reviewers will be obligated to keep all ES&S information confidential and will be prohibited from disclosing any information obtained from their review of the ES&S voting systems. ES&S requests the Secretary to consider the following:

- Opportunity for vendor to review the findings reports solely for the purpose of verifying that it contains no misstatements of fact, proprietary or confidential information or trade secrets prior to their public release, as we are certain the State can appreciate public dissemination of confidential and trade secret information can result in immediate and irreparable harm to the vendor.
- Upon review of the “Agreement”, Attachment “A”, provisions prohibiting the California Top-To-Bottom Review team and agents acting in the State’s behalf, from making or releasing any public comments regarding the review findings are absent. What limits will be put into place on public disclosure of source code, source code review results and how will this be enforced during the review process? There is a need for controlling such information to maintain public confidence in the voting systems. ES&S respectfully requests the Secretary of State revise the proposed Confidentiality Agreements to incorporate the points set forth in this letter specifically with restricting the disclosure of ES&S proprietary and confidential information including trade secrets by the examiners reviewing the voting systems. ES&S will provide any assistance necessary to ensure that such requirements are incorporated into the Confidentiality Agreements.
- It is our assumption the source code review is a search for conclusive evidence of software errors that can directly affect election results, and for conclusive evidence of software that has fraudulent intent. The source code review should not be a search for “possible vulnerabilities” supported by theoretical and/or hypothetical scenarios that are unlikely or not possible under normal election procedures. Please confirm that if no conclusive evidence is found, we are safe to assume statements of theoretical and hypothetical nature will be suppressed.
- In addition, please confirm that all analysis will be conducted, reports (preliminary or final) written, and any conclusions drawn be based upon the following foundational basis and underlying assumptions:
 - Physical security of all voting system equipment and materials is and has been maintained.
 - Physical chain of custody for all materials and equipment has not been broken or compromised.
 - Best election system administration practices and procedures have been used.
- Provide a list and backgrounds of the “qualified industry and academic experts in computer and software security, and experts in electronic voting systems that are to be engaged in both types of tests

The California Secretary of State’s Office will begin a review of all electronic voting systems “currently in use.” ES&S offers the following response:

It is ES&S’ intent to submit for review the InkaVote Plus Precinct Ballot Counter Voting System, version 2.1 comprised of the InkaVote Plus Precinct Ballot Counter (PBC) with ADA unit, version 1.10 and the Unisyn Election Management System (EMS), version

1.1. The InkaVote Plus Voting System has been NASED certified and is state certified and effectively used in Los Angeles County today. This system is currently used in conjunction with the LA County MTS Central Tabulation system, as a blended solution to meet the high volume of registered voters along with the complexity and culturally diverse population that resides within Los Angeles County.

Per your request, ES&S has forwarded to your office a working model of a complete Precinct Ballot Counter (PBC) unit with ADA device currently in use. The TDP and all associated documentation for the Unisyn Election Management System (EMS) and Precinct Ballot Counter (PBC) documentation remain the same as originally submitted and can be referenced via the States files. All firmware and software, including source code, shall be made available upon ES&S acknowledgement of the requests cited within this letter.

ES&S is concerned regarding the timing, criteria for review, and fiscal implications involved with this undertaking. We encourage you to take all of the Public input received under consideration when finalizing your Top to Bottom review.

Thank you in advance for your consideration of our comments and input.

Sincerely,

Steven M. Pearson
Vice President, Certification
(402) 970-1225
smpearson@essvote.com