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CERTIFICATION OF A CENTRAL COUNT AND PRECINCT OPTICAL SCAN VOTE TALLYING SYSTEM

In May 2005 Sequoia Pacific Voting Equipment of Little Rock, Arkansas requested the review and examination of a central count and precinct optical scan electronic vote tallying system.

Upon examination of the system, the Secretary of State finds the EMS/Aero system satisfies the requirements of Washington State law. This version of the system, NASED #N-07-12-12-001 (1990), consists of:

- *Hardware*. comprised of:
  - Optech 400-C,
  - Insight Precinct Counter, Firmware Release HPX 1.40/APX 2.06/CPX 1.12,
  - Memory Pack Receiver device;

- *Software*. comprised of:
  - EMS/Aero Version 3.54.1,
  - WinETP; software version 1.10.5 (2002),
  - Insight, Firmware Release HPX 1.40/APX 2.06/CPX 1.12,
  - Memory Pack Receiver, firmware version 2.15,
  - SPR Host, version 1.04.

On this date, under the provisions of RCW 29A.12.020, the Office of the Secretary of State hereby certifies the *"EMS/Aero Election System"*, submitted by Sequoia Pacific, and approves it for use as a central count and precinct count optical scan system by County Governments of the State of Washington when used in compliance with the procedures contained in this certification, accompanying Reports and Findings, and Washington State law.

Certified on this August 3, 2005

SAM REED
Secretary of State

STAFF REPORT OF THE SECRETARY OF STATE ON THE EXAMINATION AND EVALUATION OF AN OPTICAL SCAN ELECTRONIC VOTE TALLYING SYSTEM

In May 2005 Sequoia Pacific Voting Equipment of Little Rock, Arkansas requested the review and examination of an electronic system under RCW 29A.12.020 and 29A.12.030. The hardware and software for this system are known as the Sequoia Pacific Insight (NASED #N-07-12-12-001 (1990)). The Software that administrates the election definition and election results components of the system is the EMS/Aero Version 3.54.1. The results transfer systems includes the SPR Host, version 1.04. The hardware components include the Insight, Firmware Release HPX 1.40/APX 2.06/CPX 1.12, and the Memory Pack Receiver, version 2.15.

The Insight is a poll-site based, hand fed, optical scan/mark sense ballot card reader mounted on a ballot box. The ballot box has internal moving parts that include a ballot path diverter that directs ballots into two different bins. One bin contains ballots that have been scanned and counted that are considered complete. The other bin is intended for ballots that have write-in votes on them. All offices on ballots deposited in the write-in bin are tallied with the exception of the office with the write-in vote.

The EMS software is menu driven and allows the user to describe all aspects of an election. In preparation for ballot counting, the user enters office descriptions, positions, precinct combinations, ballot types, and any statistical information such as registered voter totals. The EMS software is used to produce and download the precinct specific programming onto the Insight memory packs inserted into the Memory Pack Receiver.

A personal computer running the Sequoia Pacific Aero serves as the central accumulator for county wide results. Aero can accumulate jurisdiction wide election results via reading the Insight memory packs with the Memory Pack Receiver or captured by the SPR Host when uploading results through telephonic communication with the Insight.

An electronic vote tallying system must meet the following requirements (as set forth in WAC 434-335-040) in order to be approved for use in Washington State:

1. Secures to the voter secrecy in the act of voting;
2. Permits the voter to vote for any person for any office and upon any measure that he or she has the right to vote for;
3. Permits the voter to vote for all the candidates of one party or in part for the candidates of one or more other parties;
4. Correctly registers all votes cast for any and all persons and for or against any and all measures;
5. Except for functions or capabilities unique to this state, has been tested and approved by the appropriate independent testing authority approved by the United States election assistance commission.
6. Correctly counts votes on ballots on which the proper number of votes have been marked for any office or issue;

7. Ignores votes marked for any office or issue where more than the allowable number of votes have been marked, but correctly counts the properly voted portions of the ballot;
8. Accumulates a count of the specific number of ballots tallied for each precinct, total votes by candidate for each office, and total votes for and against each ballot measure on the ballot in that precinct; and
9. Produces precinct and cumulative totals in printed form.
10. Be capable of being secured with lock and seal when not in use;
11. Be secured physically and electronically against unauthorized access;
12. Not be connected to, or operated on, any electronic network including, but not limited to, internal office networks, the internet, or the world wide web. A network may be used as an internal, integral part of the vote tabulating system but that network must not be connected to any other network, the internet, or the world wide web; and
13. Not use wireless communications in any way.
14. A remote tabulating system must be able to create a disk, paper tape, or other physical record of ballot results prior to a telephonic transmission of results.

Testing and evaluation EMS/Aero software with the Insight precinct optical scanner was conducted by Secretary of State staff, June 29th, 2005 in the Secretary of State's office at 520 Union in Olympia, WA. Examining the system for the Office of the Secretary of State was Paul Miller, Elections Information Manager. Also participating in the examination were members of the Pierce County Elections staff, and representatives from Sequoia Pacific. The vendor made a presentation of the EMS/Aero software with the Insight precinct optical scanner and test elections were conducted using groups of test decks prepared at the direction of the Office of the Secretary of State and other ballots prepared by the examiners.

FINDINGS OF THE SECRETARY OF STATE

The EMS/Aero software has not been used with the Insight precinct optical scanner previously in this state.

Sequoia Pacific's application requests certification of Aero with the 400-C central counter. The 400-C was also tested in conjunction with the WinEDS application. The system does provide a capability for merging results from Aero to WinEDS but in the opinion of staff, the user county should independently reconcile the reports from Aero to WinEDS.

Staff did not test support of the "pick-a-party" consolidated ballot option as incorporated by the legislature in 2004 into the "Montana-style" primary. The system does support the multiple ballot option of the same legislation. As partisan ballots are not a feature of the primary system passed by the people in Initiative 872, November 2005, this is not an impediment to certification. However, the system should be tested by the Secretary of State if the "pick-a-party" consolidated ballot option is reinstated before a county may use the "pick-a-party" consolidated ballot option.

After an evaluation of the system and a review of the accompanying documentation, staff believes the system and its components meets current Washington State requirements as outlined in WAC 434-335-040. The documentation accompanying the application for certification shows the system with upgrades was fully reviewed by federally approved independent testing authorities prior to receiving NASED certification. The EMS/Aero software with the Insight precinct optical scanner system is certified for use in California, Arizona, and Nevada.

SECRETARY OF STATE STAFF RECOMMENDATION

Staff recommends EMS/Aero software with the Insight precinct optical scanner be certified for use in Washington state, provided that the following procedures are used in conjunction with the system to assure proper tallying and results:

The procedures are as follows:

The system may be used as a poll site tabulation device if the device is set to reject blank-voted ballots and over-voted ballots. Blank-voted ballots are ballots where the device is unable to read any votes cast for any of the contests on the ballot. An over-voted ballot is one where the device registers more votes cast in one or more contest(s) than are valid for that contest. The voter must be given the opportunity to correct the ballot before the ballot is counted. It is recommended that the canvassing board of any county using this system adopt written procedures governing this process; or

A county intending to use the telephonic functions of the Insight system must perform a reconciliation of the results prior to certification. This may be accomplished by either performing a direct reading of the memory pack into the PC, or by proofing the precinct results recorded in Aero against the printout created by the Insight at the close of voting prior to telephonic transmission.

When using the Insight in conjunction with Sequoia Pacific's 400C/WinEDS central count, the user county will perform, as part of the post-election canvassing process, a reconciliation process to ensure the results from the two systems were combined correctly.

The memory pack must be treated with the same accountability and security practices that are employed with unvoted and voted paper ballots.

It is recommended that the canvassing board of any county using this system adopt written procedures governing these processes. This equipment should be used with a device or devices capable of suppressing current surges, voltage fluctuations, and any other line disturbances.

VOTING SYSTEMS REVIEW PANEL RECOMMENDATION

By consensus, the Voting Systems Review Panel adopts the recommendation of Secretary of State staff that the Sequoia EMS/Aero system with the Insight precinct counter, the Memory Pack Receiver, and the 400C central counter, as federally tested and certified by NASED under #N-07-12-12-001 (1990)) be certified for use in Washington state.

Sequoia represented at the 7-14-05 hearing that the system supports the pick-a-party consolidated ballot option enacted by the state's legislature in 2004 and reinstated in a court ruling, July 2005. The Panel understands the feature was not tested by Secretary of State staff and recommends the system be tested by a user county and the Secretary of State with a test plan developed by the Secretary of State prior to using the consolidated ballot functionality.

The Panel believes some counties might want to use the AVC Edge DRE as a disability access device along with the Sequoia Insight optical scan precinct counter in the polling place.

- The Panel has recommended that the AVC Edge DRE **not** be certified for use as a disability access device meeting the HAVA 301 requirements until the system is evaluated against the 2002 FEC standards. Sequoia intends to submit 2002 compliant versions of their system to the state in January 2006.
- The Panel understands the EMS/Aero system which supports the Insight, and the WinEDS system which supports the AVC Edge were tested and certified as two separate systems. Any counties using both systems must be able to produce separate results from both systems and reconcile the published cumulative results by independently adding the separate results together.

The Panel understands the need to treat the Insight memory packs with the same security and accountability required of paper ballots but it wants to clarify that the records retention required of paper ballots is not required of the memory packs. The memory packs may be re-used in the next election provided the paper ballots are retained according to the applicable records retention schedule.

In addition to adopting the staff recommended procedures, the Voting Systems Review Panel recommends the user county print instructions on the paper ballots that clearly state that "No Red Ink" is to be used and clearly illustrate how to properly mark a ballot.