SECRETARY of STATE
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PROVISIONAL CERTIFICATION OF AN OPTICAL SCAN SYSTEM VOTE TALLYING SYSTEM

In July 2004 Election Systems and Software (ES&S) of Omaha, NB requested the review and examination of an optical scan electronic vote tallying system under RCW 29A.12.020, 29A.12.080 and WAC 434-333-107. The hardware and software for this system is marketed under the name ES&S Optech IV-C and Optech IIIp Eagle.

Upon examination of the ES&S Optical Scan System, the Secretary of State finds that the system satisfies the requirements of Washington State law.

This version of the system consists of:

- *Hardware*. comprised of:
  - Optech IIIp Eagle, precinct counter,
  - Optech IV-C, central counter;

- *Software*. comprised of:
  - A.E.R.O.; Release 3.53 Revision 8-09-99,
  - Optech IIIp Eagle firmware, version *APS.G1.50xWA*,
  - Optech IV-C, central counter, version *1.06wa.*

On this date, the Office of the Secretary of State hereby certifies the *"ES&S Optical Scan System"*, submitted by Election Systems and Software, as an optical scan vote tallying system, and provisionally approves it for use by County Governments of the State of Washington in the 2004 Fall Primary and General Election when used in compliance with the procedures contained in this certification, the accompanying Report and Findings, and Washington State law.

Certified on this August 18, 2004

, Deputy Secretary of State, on behalf of Sam Reed

SAM REED
Secretary of State

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

The Secretary of State was informed by Kitsap County, Pierce County and Election Systems and Software (ES&S) that ES&S's voting system must be modified prior to use in the upcoming partisan primary in order to use their voting systems to meet the requirements of the partisan primary passed in the 2004 Legislative session. In July 2004 ES&S, Inc. of Omaha, NB requested the review and examination of an optical scan electronic vote tallying system under RCW 29A.12.020, 29A.12.080 and WAC 434-333-107. The hardware and software for this system is marketed under the name Optech IIIp Eagle and Optech IV-C. In addition to the Optech IIIp Eagle Hardware component, Firmware Release *APS.G1.50xWA*, and the Optech IV-C, version *1.06wa,* the Software that administrates the election definition and election results components of the system is called A.E.R.O. (Release 3.53 Revision 8-09-99).

Hardware

The Optech IV-C (firmware version *1.06wa*) is a centralized, automatic feed, high volume optical scan ballot reader. The reader interprets ballots and records precinct batch vote totals onto a personal computer. The personal computer is an IBM-compatible computer which is part of the Optech IV-C and interacts with a central server that runs A.E.R.O. The vote batch totals are uploaded to the central server where they are accumulated and reported.

The Optech III P (firmware version *APS.G1.50xWA*) is a precinct optical scan ballot card reader. The reader interprets ballots and records vote totals onto a computer "prom pack chip" or memory pack. The Optech III P unit can produce individual precinct reports on-site. Any Optech III P unit can be used to read any memory pack and produce reports.

The central server is an IBM-PC compatible computer which runs the A.E.R.O. software and functions as the central accumulator for the batch results from the Optech IV-C readers. Results from the polling places are uploaded to the server from an Optech IIIp Eagle memory pack using a memory pack reader device directly connected to the server with a serial cable.

Software

The A.E.R.O software (Release 3.53 Revision 8-09-99) is menu driven and allows the user to describe all aspects of an election. In preparation for ballot counting, the user county enters office descriptions, positions, precinct combinations, ballot types, and any statistical information such as registered voter totals. A.E.R.O is used to produce and download the precinct specific programming to the memory packs. A.E.R.O also posts the Optech IV-C batch

totals to the database, posts the precinct totals from the polling places to the election-specific results database, and reports the election results in a variety of formats including; cumulative results, precinct detail, and abstract reports.

RCW Requirements
An electronic vote tallying system must meet the following requirements (as set forth in RCW 29A.12.100) in order to be approved for use in Washington State:

1. It must correctly count votes marked on the ballot for any office or ballot proposition;

2. It must recognize and not count overvoted ballots;

3. It must accumulate a count of a specific number of ballots tallied for a precinct;

4. It must accommodate the rotation of candidates' names;

5. It must automatically produce precinct totals in either printed, marked, or punched forms; and

6. It must add precinct totals and produce a cumulative total.

Provisional Certification Requirements
Under provisions of WAC 434-333-107, the vendor must receive federal certification from the independent testing authorities for a version of their software that incorporates the modifications covered under this certification as early as possible in 2005 but no later than July 15th, 2005. The vendor must successfully complete an application for a new certification with the Secretary of State before this system may be used in federal elections in Washington State after the 2004 elections.

The county using this system under the provisions of WAC 434-333-107 must also conduct a post election logic and accuracy test of this system under this provisional certification.

Public Hearing
On August 11th and 12th, 2004 a public hearing was held to test the ES&S's optical scan electronic vote tallying system. Representing the Office of the Secretary of State was Nick Handy, State Elections Director, Pam Floyd, Voter Services Manager, Paul Miller, Elections Information Manager, and members of the Secretary of State staff. The meeting was also attended by the Honorable Pat McCarthy, Pierce County Auditor, staff members of the Pierce County Auditor's office, the Honorable Karen Flynn, Kitsap County Auditor, the Honorable Donna Eldridge, Jefferson County Auditor, Republican Party

observers, and representatives from ES&S. A series of functional and volume/stress tests were performed using mock elections simulating the Washington partisan primary and general election. The mock elections were conducted using a large volume of defined ballots simulating the conditions of this fall's elections prepared at the direction of the Office of the Secretary of State.

FINDINGS OF THE SECRETARY OF STATE

Upon review of the staff evaluation of the ES&S GEMS-OS System using the Optech IIIp Eagle, the presentation by the vendor, and the results of the tests performed on this system, the Secretary of State finds that the system satisfies the requirements of RCW 29A.12.080 and WAC 434-333-107 when used in the manner described in the Report and the special procedures below.

Special Early Voting Procedure:
The design of the Optech IIIp Eagle, and the requirements of Washington State law, necessitate the use of the following procedures on the part of the user county to use the Optech IIIp Eagle as an 'early voting' system. 'Early voting' refers to voters who cast a ballot on the Optech IIIp Eagle prior to the election date. Conceptually this is the similar to a voter picking up and casting an absentee paper ballot at the county elections office prior to an election.

The procedures are:

The system may be used as an 'early voting' system if the security safeguards applied to the Optech IIIp Eagle are consistent with those used to protect returned absentee ballots. The memory pack must capable of storing all the precincts and ballot styles that will be used in the upcoming election. Access to the Optech IIIp Eagle must be controlled and only deployed in the County's Elections office. The device must remain in plain view of the office at all times during working hours and under lock and seal after business hours. The Optech IIIp Eagle voter must sign the same oath an absentee voter does and the user county must maintain a log of all 'early' voters with the voters' signatures. The poll books must be marked with an indicator that warns the poll worker not to issue a ballot to a voter who has voted early. It is also recommended that the user county keep a record of the number of votes cast each evening when they close the Optech IIIp Eagle and confirm the number of votes on the device when opening the device the next morning. It is further recommended that the memory pack be kept separate from the Optech IIIp Eagle after hours.

Post-Election Logic And Accuracy Test
Due to the provisional nature of this certification, the county using this system will be required to conduct a special logic and accuracy test or audit of their system after Election Day but before certification of the election. (Ref. WAC 434-333-107).

Absentee Ballot Procedures

Due to the reading characteristics of optical scan readers, the county must manually inspect each absentee ballot for any markings that the reader won't "see". This includes the ballots where the voter used marking devices in the designated marking area that don't conform to the manufacturer's specifications. The county will also inspect for consistent indications of voter intent where the markings do not conform to the marking areas defined by the ballot.