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# REPORT OF THE SECRETARY OF STATE ON THE EXAMINATION AND EVALUATION OF A CENTRALIZED ELECTRONIC VOTE TALLYING SYSTEM

On April 21, 1994 American Information Systems of Omaha, Nebraska requested examination and certification of an optical scan/mark sense electronic vote tallying system under RCW 29.33.041. The hardware and software for this system is marketed under the name AIS model 150.

The AIS model 150 is a tabletop optical ballot scanner designed to be used as a central ballot counting system. The machine has an attached printer that can produce a variety of reports. The machine is programmed by the manufacture through the use of removable program chips or EPROM's. The user sends a description of the election to the vendor, the vendor programs an EPROM chip and sends it to the user for installation and testing.

The ballot for this system is a mark sense ballot that looks much like a paper ballot. Both sides of the ballot can be used for voting and there are three columns on each side for candidate races and issues. In order to vote, the voter must fill in an oval immediately to the left of their choice. The voter must use a graphite pencil, the system is not intended to read marks made by other marking tools. The ballots must be sent through the machine in a specific orientation, face-up, top edge first, and the reader scans both sides in one pass. The machine can be set to reject overvoted ballots, write-in ballots and blank ballots, it also rejects torn ballots and ballots that are stuck together.

Reports may be produced at any time during the counting process. The machine is capable of storing ballot totals on a floppy disk drive that is located in the front of the machine and is capable of restoring totals from this source in order to count additional ballots and produce updated totals.

An electronic vote tallying system must meet the following requirements (as set forth in RCW 29.34.090) 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.

7. It must meet the Federal Elections Commission Standards for vote tallying equipment as certified by an Independent Test Authority (ITA).

8. It must be certified for use in any other state of the United States.

On June 2, 1994 a public certification hearing was held in the office of the Secretary of State at the Republic Building 505 E. Union Ave. In attendance were staff of the Secretary of State, representatives of the vendor, and representatives of several counties. A series of functional tests were performed following a presentation by the vendor. A question and answer session was also held. The machine operated correctly and all questions were answered. Prior to the hearing several functional tests were performed by Secretary of State staff. Independent Testing Laboratory evaluation documentation was also reviewed that indicated the system meets all FEC standards and is certified in several other states.

## FINDINGS OF THE SECRETARY OF STATE

Upon review of the staff evaluation of the AIS model 150 vote tallying system, the presentation by the vendor, the report of the Independent Testing Authority, and the results of the tests performed before, during and following the public hearings on this system, the secretary of state finds that the system satisfies the requirements of RCW 29.33.320, WAC 434-34-050, and WAC 434-34-060 when used in the manner described below.

This system does not have the capability to automatically detect write-in votes, on a ballot, in a manner consistent with Washington State law. In order to record a write-in vote using the AIS 150 system, a voter must fill in an oval next to the write-in blank in addition to writing in the name of the candidate of their choice. RCW 29.04.180 states that a voter "need only specify the name of the candidate in the appropriate location on the ballot in order to be counted" RCW 29.54.050 states that "No write-in vote may be rejected...if the election board or canvassing board can determine the issue for or against which or person and the office for which the voter intended to vote." This system will not record a write-in vote if the voter fails to fill in the oval next to the write-in blank. A demand placed on the voter which exceeds the requirements of state law.

If a voter votes for a candidate by filling in an oval next to the candidate's name, and also writes in a name in the write-in blank, but fails to fill in the oval, they have created an overvote, but the AIS 150 will incorrectly record a vote for the regular candidate.

Because the design of the AIS reader, and the requirements of Washington State law, are in conflict, it is necessary to inspect all ballots.

The certified inspection and counting procedures are as follows:

The system may be used as a central counting system if each ballot is manually inspected for write-in votes that do not have "filled in" ovals next to them, for votes cast by a voter who has used the incorrect marking tool, or a ballot where a voter has used a method for voting other than filling in the oval. It is recommended that the canvassing board of any county using this system adopt written procedures governing this process;

Manual inspection is also necessary to insure that all votes are being counted. The inspection should be made for votes cast by a voter that has used the incorrect marking tool, or a voter that has failed to follow directions and has marked their ballot by circling candidate names or some other method besides filling in the oval.

Under the provisions of RCW 29.33.041, the AIS model 150 vote tallying system, and its associated software are approved for use in Washington State as an Optical Scan/mark sense electronic vote tabulation system. This equipment should be used with a device or devices capable of suppressing current surges, voltage fluctuations, and any other line disturbances.

Certified June 9th, 1994

RALPH MUNRO
Secretary of State