SECRETARY of STATE

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

On August 2, 1990 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 and 29.34.090. The hardware and software for this system are marketed under the name AIS model 115.

The AIS model 115 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 manufacturer through the use of removable program boards. The user sends a description of the election to the vendor, the vendor programs a board 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 not capable of storing ballot totals after being turned off and is not capable of restoring totals from any source besides the ballots.

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.

On April 18, 1991 a public certification hearing was held in the office of the Secretary of State. In attendance were staff of the Secretary of State, and a representative of the vendor. 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 a series of functional tests were performed by Secretary of State staff. Independent testing laboratory evaluation documentation was also reviewed.

FINDINGS OF THE SECRETARY OF STATE

Upon review of the staff evaluation of the AIS model 115 vote tallying system, the presentation by the vendor, 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 29.34.090 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 115 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 29.01.180 states that a voter "need only specify the name of the candidate in the appropriate location on the ballot in order to be counted." This system will not record a write-in vote if the voter fails to fill in the oval next

to the write-in blank. Additionally, if a voter creates an overvote, by voting for a candidate on the ballot, and writing in a candidate for the same office, but not filling in the oval, the AIS 115 will incorrectly record this overvote as a vote for the candidate on the ballot. The design of the AIS reader, and the requirements of Washington State law, necessitate a pre-tabulation inspection of ballots.

Under the provisions of RCW 29.33.041, the AIS model 115 vote tallying system, and its associated software are approved for use in Washington State, when used in compliance with Washington State laws, as an optical scan/mark sense electronic vote tabulation system.

The system is to be used as a central counting system, each ballot is to be 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.

This equipment should be used with a device or devices capable of suppressing current surges, voltage fluctuations, and any other line disturbances.

Certified April 19th, 1991

RALPH MUNRO
Secretary of State