SECRETARY of STATE

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

In March of 1992 Global Election Systems Inc. of Albuquerque, New Mexico requested examination and certification of an optical scan/mark sense ballot card reader system under RCW 29.33.041 and 29.34.090. The hardware and software for this system is marketed under the name ES-2000 Electronic Voting System. The ballot reader is marketed under the name Accu-vote. The Software that runs the system is called Vote Tally System (VTS) version 1.81.

The ES-2000 Accu-vote is a poll-site based, hand fed, optical scan/mark sense ballot card reader. The reader interprets marked ballots and records vote totals onto a credit card sized memory card. The Accu-vote unit can produce individual precinct reports on-site. The Memory card contains a rechargeable battery that allows storage of vote totals without being plugged into the Accu-vote. Any Accu-vote machine can be used to read any memory card and produce reports. An Accu-vote machine, attached via serial cable to the PC running VTS, is used to download and program the memory cards. The Accu-vote is also used as the PC's receiver for accumulation of results and report generation. All Accu-vote machines may be hooked up this way. Two printers may be attached to the PC for result printing and continuous log printing. The log may also be printed by the Accu-vote reader. The software is menu driven and allows the user to describe all aspects of an election. In preparation for ballot counting, the user enters all office descriptions, positions, precinct combinations, ballot types, and any statistical information such as registered voter totals. The VTS is used to produce and download the precinct specific programming onto the memory card.

The Accu-Vote reader is 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 office on ballots deposited in the write-in bin are tallied with the exception of the office with the write-in vote.

The diverter is of primary importance to the correct operation of the Accu-vote. This system should never be used to tally votes without the use of the ballot box.

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 July 29, 1992 a public hearing was held to demonstrate the Global Elections System. Representing the vendor were Frank Kaplan, and Joe Taggard. Representing the Office of the Secretary of State was David Elliott, Assistant Director of Elections. The meeting was also attended by staff members of several county auditor offices. The vendor made a presentation of the ES-2000 Accu-vote and a test election was conducted using a group of test decks prepared by the Office of the Secretary of State. The vendor answered questions from the Secretary of State staff and the public.

FINDINGS OF THE SECRETARY OF STATE

Upon review of the staff evaluation of the Global Elections Systems ES-2000 Accu-vote vote tallying system, the presentation by the vendor, the evaluation of the system conducted by ECRI in February 1991, and the results of the tests performed 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 Accu-vote 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.

A Voter, using this system, that writes-in a candidate name but fails to fill-in the oval next to the write-in blank, will not have this write-in vote recorded. An a potential problem exists, if a voter votes for a candidate by filling in the 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 next to the write-in line. This may be considered an overvote by some county canvass boards, but the Accu-vote will incorrectly record a vote for the regular candidate.

A second equally important issue is the voter that uses an incorrect marking tool, or marks the ballot in a manner inconsistent with the function of the machine. The machine will not read all types and colors of ink. Furthermore, the machine only scans the Ovals next to the candidate name looking for votes. If a voter has used the wrong type of ink, or if they have marked the ballot by circling candidate names the machine will fail to record an otherwise valid vote. A visual inspection of each ballot looking for odd marks and bad ink will solve this problem.

The design of the Accu-vote reader, and the requirements of Washington State law, necessitate the use of one of three special procedures on the part of the user County to assure proper tallying and results.

These procedures are as follows:

1) The system may be used as a central counting system if each ballot is manually inspected before tabulation. The inspection should look for write-in votes that may not have

filled-in ovals next to them. It is recommended that the canvassing board of any county using this system adopt written procedures governing this process; or

2)The system may be used as a poll site tabulation device if all ballots are inspected during the period subsequent to the election and prior to certification. The inspection of each ballot will be made to find any write-in votes that do not have the accompanying filled in oval. Election results must be updated to include any additional write-ins and to also overvote and adjust totals for any ballot that is found to be an overvote and not a valid vote for a candidate. It is recommended that the canvassing board of any county using this system adopt written procedures governing this process; or

3)The system may be used as a poll site tabulation device if all ballots are inspected by election board workers prior to tabulation. The voter would not feed his/her ballot to the Accu-vote. The voter would place his/her ballot in either a sealed ballot container or the front "emergency slot" on the ballot box. Ballots would accumulate this way while the polls are open. After closing the polls for the day the ballots would be inspected as a group, thus preserving voter anonymity. The inspection would search for write-ins that lacked the accompanying filled-in oval. The reader would then be activated and all ballots counted. It is recommended that the canvassing board of any county using this system adopt written procedures governing this process.

Under the provisions of RCW 29.33.041, the Accu-vote vote tallying system, and its associated software are approved for use in Washington State, as an optical scan/mark sense electronic vote tabulation system, when used in compliance with the procedures contained in this certification and Washington State law.

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.

Certified on this December 29, 1992

RALPH MUNRO
Secretary of State