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

In December 2001 Election Systems & Software, Inc. (ES&S) of Omaha, Nebraska requested the review and examination of a direct recording electronic voting system under RCW 29.33.041 and 29.33.300. The hardware and software for this system is marketed under the name ES&S iVotronic 2000 Touch Screen, release 6.1.2. The software that integrates the hardware components of the system is called Unity Election System version 1.0.

The iVotronic is a poll-site based, direct recording electronic voting interface. The device interprets touch in specified locations to interact with the voter. Election results are stored in triplicate. Three identical copies of the election results are redundantly stored on paralleled FLASH modules. The Personalized Electronic Ballot (PEB), a battery-backed RAM storage device with an infrared window for communication is used to administer the various functions of the iVotronic device. These functions include: opening and closing the system, as well as activating the correct ballot for each voter.

The UNITY 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 UNITY software is used to produce and download the precinct specific programming onto the iVotronic PEB.

A personal computer running the Unity Election System "Data Acquistion Manager" serves as the central accumulator for county wide results. UNITY can accumulate results via reading the iVotronic PEB or through telephonic communication with the iVotronic.

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 in accordance with the provisions of the Revised Code of Washington;

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

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

On January 22, 2001 a public hearing was held to demonstrate the Election Systems & Software's Unity Election System with the iVotronic 2000. Representing the Office of the Secretary of State was David Elliott, Assistant Director of Elections and Paul Miller, Voter Registration and Systems Manager. The meeting was also attended by The Honorable Kristina K. Swanson, Cowlitz County Auditor, staff members of the Cowlitz County Auditor's office, staff members of the Clark County Auditor's office, and representatives from ES&S. The vendor made a presentation of the Unity Election system and a test election was conducted using a group of defined votes prepared at the direction of the Office of the Secretary of State and other ballots prepared by the observers. The vendor answered questions from the Secretary of State staff and the public.

Following the public hearing and Logic and Accuracy test, a field test election was held in Cowlitz County. This election was conducted under a preliminary certification issued by the Office of the Secretary of State on January 24, 2002. The equipment was used in the election period for the February 5, 2002 Special Election and featured in-person absentee voting at the Cowlitz County Courthouse and at several polling places in the county.

Following the field test a second public hearing was held on July 8, 2002 at the office of the Secretary of State to again demonstrate iVotronic 2000 DRE Voting System. Representing the Office of the Secretary of State was David Elliott, and other members of the Secretary of State staff. The meeting was also attended by the Mason County Director of Elections, the Clark County Auditor, staff from the Thurston County Auditor's office, a representative from ES&S, and several members of the media. The vendor made a presentation of the iVotronic election system and a test election was conducted using a group of defined votes prepared at the direction of the Office of the Secretary of State and other ballots prepared by the observers. The vendor answered questions from Secretary of State Staff and others present.

A third public hearing was held on the audio voting interface of the iVotronic 2000 DRE Voting System at the Office of the Secretary of State on July 17, 2002. Representing the Office of the Secretary of State was David Elliott, and other members of the Secretary of State staff. The vendor made a presentation of the iVotronic election system audio voting features and a test election was conducted using a group of defined votes cast by the observers using the audio voting interface.

FINDINGS OF THE SECRETARY OF STATE

Upon review of the staff evaluation of the Election Systems and Software's Unity Election System (NASED N030200001.0) using the iVotronic 2000 DRE Precinct Counter, Release 6.1.2 (NASED N010105-612), the presentation by the vendor, the evaluation of the system conducted by WYLE and METAMOR laboratories in 2001 and the results of the tests performed on this system, the Secretary of State finds that the system satisfies the requirements of RCW 29.33.300 when used in the manner described below.

The user county will not use the system's provisional voting features and will continue to provide a paper ballot to voters in situations that call for a special ballot. Special ballots are part of a 'fail-safe' process that allows an individual to cast a ballot in situations where poll-workers are unable to determine the individual's eligibility. The ballot is only counted after election staff is able to determine that the individual is in fact eligible to vote on the ballot contests. The iVotronic provides a feature of convenience that allows the ballot to be cast on the iVotronic and optionally included in the election results after review by election staff. The test and materials review could not establish that the feature functions in a manner consistent with RCW and state practice for special ballots.

SPECIAL IN-PERSON ABSENTEE VOTING PROCEDURE:

The design of the iVotronic, and the requirements of Washington State law, necessitate the use of the following procedures on the part of the user county to use the iVotronic as an 'in-person absentee voting' system. 'In-person absentee voting' refers to voters who cast a ballot on the iVotronic prior to the election date. Conceptually this is the same as 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 'in-person absentee voting' system if the security safeguards applied to the iVotronic are consistent with those used to protect returned absentee ballots. Access to the Judges Booth Controller (JBC) and iVotronic must be controlled. 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 iVotronic voter must sign the same oath an absentee voter does and the user county must maintain a log of all 'in-person absentee' voters with the voters' signatures. The poll books must be marked with an indicator note that warns the pollworker not to issue a regular ballot to a voter who has voted early. The note should remind the pollworker that a special ballot may be issued. It is also recommended that the user county keep a record of the number of votes cast each evening when they close the iVotronic and confirm the number of votes on the device when opening the device the next morning. It is further recommended that the iVotronic be kept separate from the Personalized Electronic Ballot (PEB) after hours.

Under the provisions of RCW 29.33.041, the Unity Election System version 1.0 (NASED N030200001.0) with the iVotronic Touch Screen version 6.1.2 (NASED N010105-612) along with its associated firmware, are approved for use in Washington State, as a direct recording 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 July 31, 2002

SAM REED
Secretary of State