



## THE LEAGUE OF WOMEN VOTERS OF SOUTH CAROLINA

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### LWVSC POSITION PAPER ON ELECTRONIC VOTING SYSTEMS

#### **BACKGROUND ON E-VOTING IN SOUTH CAROLINA**

Prior to the November 2004 elections, South Carolina adopted statewide use of the iVotronic electronic voting machine, manufactured by Elections Systems and Software (ES&S) and purchased with federal Help America Vote Act (HAVA) funds. The iVotronic is a Direct Recording Electronic (DRE) computer that accepts a voter's selections on a touch-screen, writes these selections to internal memories, and reports votes after the polls are closed. The iVotronics do not produce a voter-verified permanent record.

#### **HISTORY OF LWV STUDY & ACTION**

Delegates at the May 2005 League of Women Voters of South Carolina convention adopted a two-year study of the iVotronic voting machines that are in use throughout South Carolina. This study was to include security from hacking and the availability of an auditable paper trail. In May 2007, at the study's conclusion, the LWVSC adopted the following position on South Carolina's electronic voting systems:

The LWVSC supports protecting the integrity of the electoral process by:

- Purchasing only voting machines that include a paper audit trail. Acceptable machines must ensure protection of privacy, allow a voter to verify his/her vote, and provide a reliable basis for a recount if required.
- Mandatory random testing of voting machines during every election.
- Requiring that source code of voting machines be open for inspection.

*(LWVSC Agenda for Action, 2007-2009, p. 19)*

This LWVSC position extends the League of Women Voters of the United States position that was adopted in June 2006 by the LWVUS convention. This LWVUS position interprets the organization's stand on Citizens' Right to Vote to affirm that LWVUS supports only voting systems that are designed so that:

- they employ a voter-verified paper ballot or other paper record, said paper being the official record of the voter's intent; and
- the voter can verify, either by eye or with the aid of suitable devices for those who have impaired vision, that the paper ballot/record accurately reflects his or her intent; and
- such verification takes place while the voter is still in the process of voting; and
- the paper ballot/record is used for audits and recounts; and
- the vote totals can be verified by an independent hand count of the paper ballot/record; and
- routine audits of the paper ballot/record in randomly selected precincts can be conducted in every election, and the results published by the jurisdiction.

*(LWVUS Impact on Issues, 2006-2008, p. 11)*

In June 2006, one year into the LWVSC study, the LWVUS adopted its position (above), requiring a paper ballot or other paper record, verified by the voter while still in the process of voting. In response, the LWVSC Board resolved that the iVotronic voting machines did not meet LWVUS requirements. In April 2007, the LWVSC concluded its study, appending the requirements above to the LWVUS requirements for voting machine security. The contribution of these positions relates to the privacy of the ballot when add-on paper audit trails are used.

#### **LWVSC'S CONCERNS ABOUT SOUTH CAROLINA'S E-VOTING SYSTEM**

The LWVSC has the following security concerns:

1. The iVotronic voting machines used in South Carolina fail to meet LWV requirements because these machines do not produce a paper audit trail that can be seen and verified by voters.
2. Paperless voting machines, such as the iVotronic, are inherently unsatisfactory because there is no guarantee that the votes reported by the machine are the same as the votes that were cast.

3. Claims of accuracy cannot be supported because the votes reported cannot be checked against a voter-verified record.
4. Furthermore, there is no meaningful way to recount the vote. "Recounting," as currently practiced in SC, consists of entering the totals from the precincts a second time and hand-counting absentee paper ballots.

**Paper Audit Trail Add-Ons**--Adding the Election Systems & Software's Real Time Audit Log (RTAL) to the iVotronics machine will not solve these problems:

- The RTAL records votes sequentially in the order in which they are cast on a roll of paper tape, similar to a grocery store tape. The time at which each vote is cast is also recorded on this tape. As a sequential record of the arrival of voters at the precinct is maintained, it is possible to associate individual voters with individual ballots. Therefore, privacy concerns make the RTAL unacceptable.
- An additional concern regarding the RTAL audit log has surfaced in May 2008 in Faulkner County, Arkansas (Conway), where two ES&S iVotronics reported votes for a race that was not on the ballot.

**Additional Concerns**--Recent reports from Ohio, California and Florida have disclosed serious problems with iVotronic voting machines. The Ohio Report, prepared for the Ohio Secretary of State, states, "Our analysis suggests that the ES&S Unity EMS, iVotronic DRE and M100 optical scan systems lack the fundamental

technical controls necessary to guarantee a trustworthy election under operational conditions."

In order to fully evaluate our iVotronics additional information is needed about both South Carolina's iVotronics and the iVotronics being compared. That information is not available for outside evaluation.

### **RECOMMENDATIONS**

The positions reached by LWVUS and LWVSC require that certain conditions be met, but do not specify technologies that meet these specifications. Among currently available election technologies that would meet LWV criteria are: vote-by-mail; paper ballots with precinct-based scanners; and paper ballots with centrally located scanners (such as at county election headquarters).

Currently, South Carolina voters may want to consider voting early, casting mail-in absentee paper ballots. These ballots will provide a voter-verifiable paper record of the voter's intent and will be scanned optically at county election headquarters.

### **RESOURCES**

For additional resources on electronic voting, see:

- *Unsafe for Any Ballot Count: A Computer Scientist's Look at the ES&S iVotronic in Light of Reports from Ohio, California and Florida, a White Paper*, prepared for LWVSC by Duncan Buell, January 2008, <http://www.lwvsc.org/votingtechnology.html>.
- *Background and Action on Voting Technology Issues*, by LWVSC, [www.lwvsc.org/votingtechnology.html](http://www.lwvsc.org/votingtechnology.html)

*The League of Women Voters, a nonpartisan political organization, encourages informed and active participation in government, works to increase understanding of major public policy issues, and influences public policy through education and advocacy. Membership in the League is open to men and women of all ages.*