

## ES&S in the News – A Partial List of Documented Failures

"The problem with touch screens as vote counters is that they can be easily manipulated"

~ Mike Devereaux, ES&S Sales Representative<sup>1</sup>

Date	Machine	Place/Description
1980		AIS, precursor to ES&S, was founded <sup>2</sup> by two brothers, Todd Urosevich, <sup>3</sup> currently ES&S Vice President of Customer Support, and Bob Urosevich, currently President of Diebold Election Systems.
November 1998	Model 100 Precinct-Count Optical Scan	<p><b>Hawaii.</b> Machines malfunctioned on election night, but a partial manual audit failed to find irregularities. Later, a mechanical test of the machine also showed no problems. A second mechanical test found the problem. Excerpts: <sup>4</sup></p> <p>Tom Eschberger, a vice president of Election Systems &amp; Software, which provided the computers for the election, said a test conducted soon after the election on the software and the machine that malfunctioned in a Waianae precinct showed the machine worked normally.</p> <p>He said the company did not know about the problem with the machine until after the Supreme Court-ordered recount, when a <b>second test on the same machine detected the malfunction.</b> He said the company is still investigating.</p> <p>... Eschberger said unforeseen problems with a new machine can happen. "But again, in all fairness, there were 7,000 machines in Venezuela and 500 machines in Dallas that did not have problems," he said.</p> <p>[However, during that same election season, the Dallas devices initially failed to count 41,000 votes. And two years later, massive breakdowns and technical difficulties with ES&amp;S systems rocked the Venezuelan national elections, causing the vote to be suspended. Pres. Hugo Chavez and Venezuelan election officials accused the company of "trying to destabilize the country's electoral process," while protesters chanted "Gringos go home!" at ES&amp;S technicians.] <sup>5</sup></p> <p>Yoshina [chief election officer] noted the machines were certified by the Federal Elections Commission. "I would hope that because an independent testing authority had tested the system and it was certified, that all these things are fully tested," he said.</p>

<sup>1</sup> **Election commission hears last pitch on vote machines.** Benton Courier. June 25, 2004. By Richard Duke.

<http://www.bentoncourier.com/articles/2004/12/22/news/46tnews.txt>

<sup>2</sup> **Who Counts The Votes?** By Gary Ashwill and Chris Kromm. <http://www.southernstudies.org/reports/votingmachines-new.htm>

<sup>3</sup> [http://www.essvote.com/index.php?section=exec&rightnav=about&f\\_exec\\_id=4](http://www.essvote.com/index.php?section=exec&rightnav=about&f_exec_id=4)

<sup>4</sup> **Voting checks failed to detect fault twice: A flawed ballot counter passed a manual check and a mechanical test**

Star-Bulletin; Wednesday, February 3, 1999; By Craig Gima. <http://starbulletin.com/1999/02/03/news/story1.html>

<sup>5</sup> **Who Counts The Votes?** By Gary Ashwill and Chris Kromm. <http://www.southernstudies.org/reports/votingmachines-new.htm>

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November 1998	Model 100 Precinct-Count Optical Scan	<p><b>Hawaii (continued).</b> A later article pointed out: <sup>6</sup></p> <p>Faulty ES&amp;S machines used in Hawaii's 1998 elections forced that state's first-ever recount.</p> <p>The company paid \$250,000 to settle contract disputes and \$280,000 to recount the ballots after complaints about poorly trained poll watchers, malfunctioning voting machines and spoiled ballots.</p> <p>March 1999. From an official statement about the problems in the previous November election. <sup>7</sup></p> <p>There was an obvious problem with seven voting units from Election Systems and Software -- out of 361 units used on Election Day.</p> <ul style="list-style-type: none"> <li>◆ Five units had lens occlusion</li> <li>◆ One unit had a defective cable</li> <li>◆ One unit had a defective "read head"</li> </ul>
November 1998	Votronic and Model 100	<p><b>Dallas, Texas</b></p> <p>A software programming error caused Dallas County, Texas's new, \$3.8 million high-tech ballot system to miss 41,015 votes during the November 1998 election. The system refused to count votes from 98 precincts, telling itself they had already been counted. Operators and election officials didn't realize they had a problem until after they'd released "final" totals that omitted nearly one in eight votes.</p> <p>The system vendor, ES&amp;S, assured voters that votes were never lost, just uncounted. The company took responsibility and was trying to find two apparently unrelated software bugs, one that mistakenly indicated precinct votes were in when they weren't, and another that forgot to include 8,400 mail-in ballots in the final tally. Democrats were livid and suspicious, but Tom Eschberger of ES&amp;S said, "What we had was a speed bump along the way."<sup>8</sup></p> <hr/> <p>After Nov. 3, Sherbet was quoted in the Dallas Morning News as saying, "In 17 years of doing this, there's been nothing more troublesome to me, more humiliating."<sup>9</sup></p>

<sup>6</sup> **Firm admits errors in counting votes for Hawaii, Venezuela.** The Star Bulletin; June 7, 2000; by Jessica Fargen, Associated Press.  
<http://starbulletin.com/2000/06/07/news/story3.html>

<sup>7</sup> Statement by Marion Higa, State Auditor, and Chair of Elections Oversight Committee. March 15, 1999; [www.state.hi.us/elections/review98.html](http://www.state.hi.us/elections/review98.html)

<sup>8</sup> **Black Box Voting** by Bev Harris, Chapter 2.

<sup>9</sup> **Who Counts The Votes?** By Gary Ashwill and Chris Kromm. <http://www.southernstudies.org/reports/votingmachines-new.htm>

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November 1998	Optical scan	<p><b>Rhode Island</b> <sup>10</sup></p> <p>In Rhode Island, primary election results were delayed until 11 a.m. the next day because of a computer glitch in its new \$1 million system.</p>
May 2000	Votronic	<p><b>Venezuela.</b> The election had to be postponed because of problems with the electronic voting system.</p> <p>... in Venezuela, an electronic voting system produced that very same year [2000] what is widely known as the "mega-flop."</p> <p>The biggest election in Venezuela's history was supposed to take place on May 28, 2000. More than 6,000 public offices were up for grabs, and Chavez, elected in 1998, was seeking re-election.</p> <p>But two days before the vote, the Supreme Court postponed the election because of problems with computer software needed to tabulate votes and register more than 36,000 candidates. It was humiliating for election officials who had insisted things were going smoothly.</p> <p>The Omaha, Neb.-based software provider, Election Systems &amp; Software, blamed constant changes by election authorities in posting thousands of candidates.</p> <p>... the postponement prompted authorities to reject any new deal with ES&amp;S.<sup>11</sup></p>
November 2000	Optech Eagle precinct-count optical scan	<p><b>San Francisco, California.</b> Huge discrepancies occurred between the number of ballots and the number of votes counted. In some precincts there were more votes counted than the number of ballots cast. In others there were more ballots than votes counted. <sup>12</sup></p> <p>In polling place 2214 in the Western Addition, the city counted 416 ballots, but there were only 362 signatures in the roster, and the secretary of state found only 357 paper ballots.</p>

<sup>10</sup> Who Counts The Votes? (see above)

<sup>11</sup> **Venezuela Using Untested Voting Machines.** ABC News. July 11, 2004. <http://www.wjla.com/news/stories/0704/158551.html>

<sup>12</sup> **S.F. vote appears flawed but legal; Probe of 2000 election finds work was sloppy.** San Francisco Chronicle. February 11, 2002. By Erin McCormick, Chronicle Staff Writer. <http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2002/02/11/MN209475.DTL>

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November 2000	iVotronic	<p><b>Pulaski County, Arkansas.</b> <sup>13</sup> More than two dozen voters reported that the screen registered the wrong choice.</p> <p>Virginia Buck isn't sure what went wrong with the machine she used Thursday at the Walker Tennis Center in Little Rock. She said she marked her vote for Snyder and went on to fill out the rest of her ballot. When she went back to double check her votes, she found a mark beside Thomas' name.</p> <p>"To me, it's horrifying to think what would have happened if I'd not taken the time to go back. I'm sure a lot of people didn't do that," she said.</p>
February 2002		<p><b>Arkansas.</b></p> <p>February 5, 2002 – Arkansas Secretary of State Bill McCuen pleaded guilty to felony charges that he took bribes, evaded taxes and accepted kickbacks. Part of the case involved Business Records Corp. [now merged into Election Systems &amp; Software ], a Dallas company that sold Arkansas computerized systems for recording corporate and voter registration records.</p> <p>Arkansas officials said the scheme involved...then-BRC employee Tom Eschberger...Eschberger got immunity from prosecution for his cooperation. Today, he's a top executive of ES&amp;S. <sup>14</sup></p>

<sup>13</sup> **Voting machines err, misread Snyder votes.** Arkansas Democrat-Gazette; November 3, 2000; By Austin Gelder.

<http://www.freerepublic.com/forum/a3a02bcf4756a.htm>

<sup>14</sup> **Arkansas Secretary of State pleads guilty to taking bribes in computer voting equipment case.** The Baton Rouge Advocate.

<http://www.ejfi.org/Voting/Voting-28.htm>. Reproduced under the Fair Use exception of 17 USC § 107 for noncommercial, nonprofit, and educational use.

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April 2002	iVotronic	<p><b>Miami-Dade County, Florida.</b> In Medley, the software used to combine 45 absentee votes with the 309 electronic ballots changed the order of the candidates' names as it computed the results. The initial tally showed wins for two City Council candidates who actually lost the election. David Leahy, Miami-Dade <b>elections</b> supervisor said that all software had been tested before the election without a problem. Election workers who had been watching the results fed into the computer noticed the problem. <b>The tabulation computer didn't give any warning.</b></p> <p>An ES&amp;S technician had opened the ballot program on the memory cards to change a header. At the same time, he bumped the first candidate to the last position.</p> <p>When the technician saved the edit, a prompt most likely popped up on the monitor asking him if he was sure he wanted to change the order of the names. The technician ignored the prompt and confirmed the change.</p> <p>"It was something that should have been picked up and caught and was missed and was not flagged because the normal follow-up procedures to making a change in the database were not followed," [Mike] Limas [ESS Chief Operating Officer] said.</p> <p>... Leahy said he is concerned because the computer did not raise any red flags, and humans had to spot the error. "If something is amiss you should get some type of error message, but there wasn't one," he said.</p> <p>... In the future, Leahy said county election workers, not technicians from the equipment company, will program all the touch-screen and absentee ballot machines before an election to try to limit the possibility of error.</p> <p>He also suggested that humans might add up the absentee ballots with the touch-screen voting results to double check the computer's tally. <sup>15</sup></p>

<sup>15</sup> **Technician's Error, Not Machines, To Blame In Dade Election Mix-Up.** The Miami Herald. April 4, 2002. By Oscar Corral. [Purchase through Miami Herald online archives: <http://www.miami.com/mld/miamiherald/archives/>]

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April 2002		<p><b>Dallas County, Texas.</b> A ballot programming error tallies 18 results incorrectly. Here is one case when flawed ballot data on a paperless electronic voting machine caused a serious election miscount. It was detected only because voters also used optical scan paper ballots in the election.<sup>16</sup></p> <p>Mrs. Hawkins-Curtis, a candidate for Rowlett mayor was added to the ballot four days before the start of early voting. The change in the ballot definition wasn't programmed into all 390 ES&amp;S iVotronic machines until after early voting began. The ballot data was changed only in Rowlett polling places.</p> <p>When the results were combined with the results from ES&amp;S optical scan machines, the error caused the tally software to improperly tally results in the mayor's race as well as 17 other races, including propositions and school board races. Nearly 5,000 of the 18,000 ballots were improperly counted.</p> <p style="padding-left: 40px;">An initial count didn't reveal a problem, and the results of all races were posted as final but "unofficial" on the Election Department's Web site at 10:17 p.m. Saturday.</p> <p style="padding-left: 40px;">A few minutes later, a second count - called the reconciliation process - began to show that the number of voters who signed in at numerous precincts didn't match the vote totals, Ms. Pippins-Poole [county's assistant elections administrator] said.</p> <p style="padding-left: 40px;">The extent of the miscount wasn't discovered until Monday when Election Systems &amp; Software began a thorough investigation, Ms. Pippins-Poole said.</p> <p style="padding-left: 40px;">...The touch-screen ballots have been used in early voting in 91 elections since 1998 without any problems, Ms. Pippins-Poole said.</p>
August 2002	Central count optical scan	<p><b>Clay County, Kansas.</b> The machine showed that the challenger (Jennings) had won, but a hand recount showed that the incumbent commissioner (Mayo) won by a landslide – 540 votes to 175.</p> <p style="padding-left: 40px;">In one ward, which Mayo carried 242-78, the computer had mistakenly reversed the totals.<sup>17</sup></p> <p>This statement suggests that the computer in the "one ward" had the candidates mis-mapped to the table that holds the voting results.</p>

<sup>16</sup> **Glitch affects 18 races: Problems in counting early votes could alter some election outcomes.** Dallas Morning News. May 8, 2002. Ed Housewright, staff writer.

<sup>17</sup> **Aug. 6 ballot problems alleged: Clay, Barton county candidates seek review of races.** Lawrence Journal-World. August 22, 2002. The Associated Press.  
<http://www.ljworld.com/section/election02/story/103526>

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September 2002	iVotronic DRE firmware 7.2.5	<p><b>Miami-Dade County, Florida.</b> An analysis of the September election by the Florida ACLU determined that 8.2% of the votes were "lost" in 31 problem precincts. Significantly more votes were lost in predominantly black areas.<sup>18</sup></p> <p>An examination of 31 problem precincts revealed at least 1,544 lost votes, approximately half of which were from African-Americans, and a "lost vote" rate of 8.2% of all voters who went to the polls and signed in to vote.</p> <p>"Not only are there a significant number of missing votes, but there's also an alarming racial disparity in the errors that occurred during the last election," said Jonel Newman, the Special ACLU Staff Attorney leading the ACLU's voting probe. A team of volunteer law students from the University of Miami assisted Newman. ...</p> <p>An in-depth analysis of those 31 precincts revealed that:</p> <ul style="list-style-type: none"> <li>◆ 18,752 voters signed the rolls to vote, but only 17,208 votes were recorded. That is, 1,544 votes were lost due to election-day errors that included voters not being able to vote because working machines were not available or the failure of poll workers to cast the ballot as required when voters leave without pressing the red VOTE button. ...</li> <li>◆ While the average "lost vote" rate in the 31 targeted precincts is 8.2%, in some precincts that rate is as high as 21.5%.</li> </ul>
September 2002	Optical scan	<p><b>Union County, Florida.</b><sup>19</sup></p> <p>In Union County, Florida, a programming error caused machines to read 2,642 Democratic and Republican votes as entirely Republican in the September 2002 election. The vendor, ES&amp;S, accepted responsibility for the programming error and paid for a hand recount.</p>

<sup>18</sup> **Analysis of September 10th Voting Fiasco in Miami Dade Demonstrates Disproportionate Impact on Racial Minorities, ACLU Says.** October 21, 2002 Press Release. [http://www.aclufl.org/news\\_events/archive/2002/racialimpactrelease.cfm](http://www.aclufl.org/news_events/archive/2002/racialimpactrelease.cfm)

<sup>19</sup> **Black Box Voting** by Bev Harris, Chapter 2.

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October 2002		<p>The <b>Florida</b> Association of Counties endorsed ES&amp;S machines exclusively, as a result of the lobbying efforts of Sandra Mortham. Both the association and Mortham received commissions from ES&amp;S on the equipment sold. <sup>20</sup></p> <p>A former Florida secretary of state profited by being a lobbyist for both the state's counties and the company that sold some of them touch screen voting machines used in last month's botched primary election.</p> <p>Sandra Mortham, who served as the state's top elections official from 1995 to 1999, is a lobbyist for both Election Systems &amp; Software and the Florida Association of Counties, which exclusively endorsed the company's touch screen machines in return for a commission. Mortham received a commission from ES&amp;S for every county that bought its touch screen machines. The exact terms have not been disclosed.</p> <p>... The association will receive about \$300,000 in commissions, according to the agreement.</p>
October 2002	iVotronic DRE	<p><b>Dallas County, Texas.</b> Machines register incorrect choices on the screen. <sup>21</sup></p>
November 2002	iVotronic DRE	<p><b>Broward County, Florida.</b> A software error caused 103,222 (22%) votes cast on ES&amp;S iVotronic paperless voting machines not to be counted in the initial tally. <sup>22</sup></p> <p>The Broward County Election Department said the software error was discovered between 1 a.m. and 5 a.m. Wednesday, revising voter turnout from 35 percent to 45 percent once the votes were counted.</p> <p>... David Host, a spokesman for the Florida secretary of state, had called the elections "an unqualified success."</p>

<sup>20</sup> **Lobbyist made money from touch screen sales.** St. Petersburg Times; October 6, 2002 ; Associated Press.

[http://www.google.com/search?q=cache:WJT4jZ8WH0AJ:www.sptimes.com/2002/10/06/news\\_pf/State/Lobbyist\\_made\\_money\\_f.shtml+Florida+%2B+ES%26S+problems&hl=en&ie=UTF-8](http://www.google.com/search?q=cache:WJT4jZ8WH0AJ:www.sptimes.com/2002/10/06/news_pf/State/Lobbyist_made_money_f.shtml+Florida+%2B+ES%26S+problems&hl=en&ie=UTF-8)

<sup>21</sup> **Area Democrats say early votes miscounted;** The Dallas Morning News; October 22, 2002; By Ed Housewright and Victoria Loe Hicks

<sup>22</sup> **Election glitch missed 103,000 votes in Florida county;** CNN; November 8, 2002.

<http://www.cnn.com/2002/ALLPOLITICS/11/07/elec02.florida.votes.missing/>



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November 2002	iVotronic DRE firmware 6.2.0.1	<p><b>Wake County, North Carolina.</b> Machines lost 436 ballots in early voting. When the county director of elections contacted ES&amp;S, company officials admitted that they knew the firmware was flawed. Jackson County had previously had the same problem, and the company had replaced it with version 6.2.1.3, which the Jackson County Director said had showed no problems. <sup>23</sup></p>
November 2002	Optech 3P Eagle	<p><b>Baldwin County, Alabama.</b> Tabulation machine initially handed the gubernatorial election to the wrong candidate.</p> <p>Initial, unofficial results from Baldwin County showed that Democrat Don Siegelman garnered about 19,070 votes in the county, enough to give him a razor-thin victory over Republican challenger Bob Riley. The next morning, however, officials said those totals were inaccurate and certified returns giving Siegelman about 6,300 fewer votes -- enough to swing the election to Riley.</p> <p>... Officials have traced the problem to a data pack from the Magnolia Springs voting location. They said the vote-counting machine there printed out accurate results when the polls closed at 7 p.m. But they said the cartridge, which resembles an eight-track cassette, gave bogus figures when it was plugged into the computer in Bay Minette. <sup>24</sup></p> <p>...[Mark] Kelley [general manager of Election Systems &amp; Software] said a power surge at the precinct, static electricity or something else may have caused the glitch. He said technical experts at the company's computer lab in Rockford, Ill., may be able to determine the reason.</p> <p>...He noted that at least three other counties experienced similar glitches on election night. But officials in Madison, Etowah and Barbour counties discovered and corrected the errors, in some cases by manually typing in vote totals.</p>
November 2002	iVotronic	<p><b>Broward County, Florida.</b> Machines register votes for opponents. <sup>25</sup></p> <p>On Election Day, callers to a Florida radio talk show complained of “broken” ES&amp;S Votronic touch-screen voting machines, according to the Drudge Report.</p> <p>“I voted for McBride, but the machine counted it as Bush. It did this three times. The polling worker finally said, ‘We have to re-program this machine.’ Another person was having the same trouble while I was there,” a voter told Neil Rogers on his highly rated AM radio show.</p>

<sup>23</sup> **Electronic Miscounts and Malfunctions In Recent Elections**, Page 29. <http://www.verifiedvotingfoundation.org/downloads/resources/documents/ElectronicsInRecentElections.pdf>

<sup>24</sup> **Voting snafu answers elusive.** The Mobile Register; 28 Jan 2003; by Brendan Kirby, staff writer. Referenced at <http://www.votewatch.us/Members/Unregistered%20User/electionexperience.2004-08-12.9166974619>. Confirmed by VotersUnite! with Sharon Jerkins in the Baldwin County Elections office, who provided the model number of the optical scan machines.

<sup>25</sup> **U.S. Voters Hoodwinked; The American Free Press; November 15, 2002; by Christopher Bollyn**  
[http://www.americanfreepress.net/11\\_15\\_02/U\\_S\\_Voters\\_Hoodwinked/u\\_s\\_voters\\_hoodwinked.html](http://www.americanfreepress.net/11_15_02/U_S_Voters_Hoodwinked/u_s_voters_hoodwinked.html)

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November 2002	Optical scan	<b>Sarpy County, Nebraska.</b> The optical scan machines failed to tally “yes” votes on the Gretna school-bond issue, giving the false impression that the measure failed miserably. The measure actually passed by a 2-1 margin. Responsibility for the errors was attributed to ES&S, which provided the ballots and the machines. <sup>26</sup>
November 2002	Optech Eagle	<b>Wayne County, North Carolina.</b> A programming error caused the Optech Eagle optical scan machines to skip several thousand party-line votes, both Republican and Democrat. Correcting the error turned up 5,500 more votes and reversed the outcome for the House District 11 state representative race. <sup>27</sup>
November 2002	Optech 4C	<b>South Dakota.</b> When the optical scanner double counted votes, the error was blamed on a “flawed chip.” ES&S sent a replacement chip, and voters demanded that the original chip be impounded and examined. Only ES&S was allowed to examine the chip. <sup>28</sup>
November 2002	Votronic	<p><b>Ascension Parish and Tangipahoa Parish, Louisiana.</b> Over 200 of the ES&amp;S machines (about 20%) malfunctioned on election day – overheating, locking up, and even shutting down while a voter was voting. According to the Baton Rouge Advocate, the state committee that chose ES&amp;S ignored the wishes of local officials, who preferred another system.</p> <p>[Ascension Parish Clerk of Court Hart] Bourque said his staff was on the road repairing machines from 5 a.m. to 9 p.m. In one case, a machine wasn't repaired until 12:30 a.m. Wednesday.</p> <p>"A mechanic would fix a machine, and before he could get back to the office, it would shut down again," Bourque said.</p> <p>"Unless we find a solution, next fall there's no way we can vote the people," Bourque said.</p> <p>"I'm shaking in my boots about next fall's election," he said. <sup>29</sup></p> <p>If the machines had worked satisfactorily, they were to be purchased for the whole state. Louisiana didn't purchase them for the whole state.</p>

<sup>26</sup> **Omaha World-Herald**, 6 November 2002; “A late night in Sarpy; glitches delay results”. Referenced in *Black Box Voting*, by Bev Harris. Chapter 2.

<sup>27</sup> **"Winners' may be losers."** The News and Observer; November 12, 2002; By Wade Rawlins and Rob Christensen. Reproduced at: <http://66.102.7.104/search?q=cache:iy0f4rgd7oMJ:www.ncdot.org/news/dailyclips/2002-11-12zz.html+%22%27Winners%27+may+be+losers%22+wayne&hl=en>

<sup>28</sup> **NPR: Morning Edition**, 6 November 2002; “Analysis: Senate races in Minnesota and South Dakota” Referenced in *Black Box Voting* by Bev Harris, Chapter 2.

<sup>29</sup> **Voting machine glitches worrisome in 2 parishes.** The Advocate Online News. November 7, 2002. By John McMillan and Bob Anderson. [http://64.233.161.104/search?q=cache:c-qZevr6yWgJ:staging.theadvocate.com/stories/110702/new\\_votronic001.shtml+Votronic+%2B+problems&hl=en](http://64.233.161.104/search?q=cache:c-qZevr6yWgJ:staging.theadvocate.com/stories/110702/new_votronic001.shtml+Votronic+%2B+problems&hl=en)

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November 2002	Optical scan	<b>Adams County, Nebraska.</b> During the general election, Adams County was the last in Nebraska to have election results, due to both machine and software malfunctions. ES&S talked about some compensation for the election problems including paying for election worker overtime and not charging for <b>programming adjustments</b> . <sup>30</sup>
November 2002	Optech 3P	<b>Chatham County, North Carolina.</b> A ballot programming error caused Republican votes to go to the Libertarian candidate. <sup>31</sup>  ... every time voters marked a straight Republican ticket, Frederick C. Blackburn, the N.C. House 54 Libertarian candidate, got a vote because of a voting machine programming error.
April 2003	Model 100 Precinct optical scan	<b>Lake County, Illinois.</b> <sup>32</sup> Machines provided incorrect outcomes for 4 races in Lake County.  The problem was caused by a programming error that failed to account for "no candidate" listings in some races on the ballot, Clerk Willard Helander said Thursday. As a result, election results were placed next to the names of the wrong candidates in four different races, including in Waukegan's 9th Ward.  Incorrect results also were tabulated in races for the Libertyville Community High School District 128 Board, the North Chicago Community Unit District 187 Board and the Foss Park District Board in North Chicago.  The clerk's office corrected the problem shortly after 10 p.m. on election night. But by then, many people who had kept track of the results on the clerk's online Web site believed the unofficial results were complete.  ... Helander blamed the problem on Election Systems & Software, the Omaha company in charge of operating the county's optical-scan voting machines. She said a company official told her the programmers were unaware the county would have "no candidate" listings on its ballot.

<sup>30</sup> YorkNewsTimes.com, December 20, 2002; "Omaha election systems firm to pay for county election problems." Referenced in *Black Box Voting*, by Bev Harris. Chapter 2.

<sup>31</sup> **Mechanic to smooth vote.** New Observer. October 15, 2004. By Jessica Rocha, Staff Writer. <http://newsobserver.com/news/story/1730333p-7996316c.html>

<sup>32</sup> **Returns are in: Software goofed – Lake County tally misled 15 hopefuls.** Chicago Tribune; April 4, 2003; By Susan Kuczka, Tribune staff reporter reproduced at <http://www.vote.caltech.edu/mail-archives/votingtech/Apr-2003/0096.html>

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Date	Machine	Place/Description
Fall 2003	Votronic	<p><b>Guilford County, North Carolina.</b> Votronic voting machines lose 354 ballots. <sup>33</sup></p> <p>Records from Gilbert’s office [George Gilbert, Guilford County director of elections] show that voters in mostly rural precincts – where the bond was the only item on the ballot – cast 354 blank ballots. The blanks amounted to only about half a percent of the total vote and could not have changed the outcome of the election. The bonds were approved by a 2-1 margin.</p> <p>Gilbert said the percentage of blank ballots was “extraordinarily high” in some precincts. A few of the blank ballots were because of mistakes by poll workers, he said. <b>But he said he has no explanation for most of them, though he is sure the voting machines are not to blame.</b></p>
November 2003	iVotronic	<p><b>Louisiana.</b> Tom Eschberger admits making campaign contributions to a potential customer. Three hundred of the nine hundred voting machine subsequently sold to Louisiana did not include the shields designed to keep the machines from overheating. And Eschberger admits that the problems were partially because ES&amp;S employees didn't know what they were doing. <sup>34</sup></p> <p>Eschberger estimated that 30,000 similar ES&amp;S machines are in use and working well. "Did the ones in Louisiana work?" he said "No."</p> <p>...The Louisiana Commissioner of Elections Office "had a lot of people who didn't know what they were doing, coupled with the fact that we had people who didn't know what they were doing," Eschberger said.</p> <p>Ultimately, ES&amp;S replaced and upgraded the machines sold to Louisiana, and reassigned a stronger support team to Louisiana. In the most recent election, Eschberger said, only one of the machines went down.</p>
January 2004	iVotronic DRE firmware 7.4.5	<p><b>Broward County, Florida.</b> Machines showed 134 blank ballots. The winning margin was 12 votes. Since Florida law required an examination of the invalid ballots, and no ballots were available to examine, the county could not comply with Florida law. <sup>35</sup></p>

<sup>33</sup> **Report questions secure use of voting machines.** News & Record. February 8, 2004. By Alex Wayne, Staff Writer.  
<http://www.votersunite.org/article.asp?id=1155>

<sup>34</sup> **Louisiana's voting machine saga is bound to continue.** The Shreveport Times; November 30, 2003; Dan Turner.  
[http://nl.newsbank.com/nl-search/we/Archives?s\\_site=shreveporttimes&p\\_product=STIB&p\\_theme=gannett&p\\_action=keyword](http://nl.newsbank.com/nl-search/we/Archives?s_site=shreveporttimes&p_product=STIB&p_theme=gannett&p_action=keyword) (paid archives)

<sup>35</sup> **New system no easy touch for 134 voters in Broward.** Miami Herald; January 08, 2004; By Erika Bolstad;  
<http://www.miami.com/mld/miamiherald/news/politics/7660910.htm>

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
March 2004	iVotronic	<p><b>Bexar County, Texas.</b> Misprogramming causes the Unity software to balk at accumulating votes from the optical scan machines used to count absentee ballots.<sup>36</sup></p> <p>Tabulation of the Bexar County votes was delayed for about 1 1/2 hours, beginning about 8 p.m.</p> <p>... "They have big problems," said Nick Peña, a poll watcher for District 28 U.S. Rep. <b>Ciro Rodriguez</b>, D-San Antonio. "They look very worried."</p> <p>"They have a bunch of technicians in the tabulation room, and they are pulling out wires and reattaching them, and the computer screens are all frozen. You can tell that something is happening," Peña said.</p> <p>... Borofsky said the delay occurred after it was discovered the tabulation computers hadn't been properly programmed with updated data in order to count the mail-in paper ballots.</p> <p>The computer system then was taken off line and updated with the information needed to process the 3,000 paper ballots, which were tabulated using high-speed scanners.</p>
March 2004	iVotronic	<p><b>Sarasota County, Florida.</b> According to the county Board of Elections, the votes of 189 people were never counted, but the County Commissioners are content.<sup>37</sup></p> <p>"I've spent hours meeting with groups and I don't take the issues lightly," [Supervisor of Elections Kathy] Dent said. "The accuracy rate (of the touch-screen) has been certified to one error in 1 million votes."</p> <p>... Critics cited the Democratic presidential primary in March as evidence that the machines are prone to error. According to the county Board of Elections, the votes of 189 people were never counted.</p> <p>The commissioners peppered Dent with questions about the reliability of the system, but ultimately were convinced that their decision a few years ago to purchase the touch-screen system was a good one.</p> <p>For the error rate cited by Dent to be correct, Sarasota County would have to have 189 million voters – which it does not.</p>

<sup>36</sup> **Bexar computer glitch delays counting of votes.** San Antonio Express News. March 10, 2004. Tom Bower. <http://www.mysanantonio.com/news/metro/stories/MYSA10.12A.VotingProblems0310.4ea013d9.html>

<sup>37</sup> **Sarasota to forgo paper trail for ballots.** Sarasota Herald Tribune; April 30, 2004. By Kim Hackett <http://www.starbanner.com/apps/pbcs.dll/article?AID=2004204300361>

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
March 2004	Optical Scan	<p><b>Lubbock County, Texas.</b><sup>38</sup> The machines failed to count the votes for the Precinct 8 Democratic chairman race. Dorothy Kennedy, Lubbock County elections administrator said they would need to recount all the ballots for all races in the county.</p> <p style="padding-left: 40px;">She said Omaha, Neb.-based ES&amp;S, which prepared the vote tabulators, will foot the bill for the recount.</p>
March 2004	iVotronic uncertified firmware 7.4.5; certified, flawed firmware 6.1.2	<p><b>Indiana – four counties.</b> It was discovered that ES&amp;S had installed an uncertified version of firmware in the iVotronics in four counties. When confronted, representatives agreed to reinstall the certified version. Then it was determined that the certified version doesn't tabulate the votes correctly, so the county allowed the use of the uncertified version but required ES&amp;S to put up a \$10Million bond to insure against problems and lawsuits. Excerpts from a WISH TV story:<sup>39</sup></p> <p style="padding-left: 40px;">“Am I so damn stupid...that for me to use the word "work," do you understand that to run an election for something to work, it's gotta count the votes?” asked an exasperated election commissioner S. Anthony Long to ES&amp;S executive Ken Carbullido.</p> <p style="padding-left: 40px;">“I just think I was absolutely lied to by your CEO and I'm more than on the slow burn about it. I sat in this room and you all lied to me. You're so derelict in your duties that you can't look at a piece of paper and answer the question? Give me a break,” said Brian Burdick, who also serves on the election commission.</p>

<sup>38</sup> **Software blamed in Precinct 8 Democratic chair race mixup.** Lubbock online.com; March 11, 2004; By Brian Williams, Avalanche-Journal  
[http://www.lubbockonline.com/stories/031104/loc\\_031104030.shtml](http://www.lubbockonline.com/stories/031104/loc_031104030.shtml)

<sup>39</sup> **Election Commission Bails Out Voting Machine Maker In Time for May Primary.** March 11, 2004; <http://www.wishtv.com/Global/story.asp?S=1706282>

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
April 2004	iVotronic	<p><b>Indiana.</b> Specifically in response to the unethical behavior of ES&amp;S, the Indiana state legislature passed a law providing penalties for voting machine vendors who act on their own initiative without the permission of the state. <sup>40</sup></p> <p>“We are now going to make it illegal for a voting system vendor to operate in Indiana -- that is sell, market, lease a system that is uncertified,” said Todd Rokita, secretary of state.</p> <p>As the state's chief election official, Rokita allows it wasn't easy getting there. “One of the very few pieces of legislation that got passed this session and was actually signed by the governor,” he said.</p> <p>It prohibits companies from marketing, selling, leasing or installing a voting system improvement or change in Indiana without state election commission approval. “And if they do, there will be severe economic penalties,” said Rokita.</p>

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<sup>40</sup> **Penalties Established for Voting Machine Companies That Don't Deliver.** April 14, 2004;  
<http://www.wishtv.com/Global/story.asp?S=1786070&nav=0Ra7JXq2>

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
May 2004	Optical scanners	<p>Ballot Programming Errors in Three Arkansas Counties, May 2004</p> <p><b>1) Sevier County.</b> The chip programmed by ES&amp;S for the county's optical scan counted all ballots as blank. The test ballots were printed correctly, and the pre-election testing was successful. But then the ballots for election day were printed in a different print run.<sup>41</sup></p> <p style="padding-left: 40px;">After consulting with officials from Election Systems &amp; Software, it was determined that the codes on the computer chip and the codes on the ballot didn't match.</p> <p><b>2) Fulton County.</b> The chip programmed by ES&amp;S for the county's optical scanner didn't work. ES&amp;S claimed that the printer didn't send them all 16 ballots needed for the programming. The printer said he did send the entire set of ballots, and his records showed that the weight of the package mailed to ES&amp;S was the weight of 16 ballots.<sup>42</sup></p> <p style="padding-left: 40px;">Riverside Graphics printer Michael Eaton insisted his company sent ESS [sic] a full set of ballots. "We printed the ballots for Independence County where there are three times as many people and we didn't have any problems. We've had this problem with ESS before," said Eaton.</p> <p style="padding-left: 40px;">He said Riverside Graphics checked its postage records, and the weight of the package sent to ESS was consistent with a package containing 16 ballots.</p> <p><b>3) Craighead County.</b> The chip programmed by ES&amp;S for the county's optical scanner gave one candidate all the votes for constable. A manual recount revealed the error.<sup>43</sup></p> <p style="padding-left: 40px;">A recount was made in the District 13 constable race because returns from Precinct 20 showed one candidate received all 158 votes cast in the precinct, and the opposing candidate doubted that.</p> <p style="padding-left: 40px;">The incident was traced back to a computer chip coding error, and the result of the recount was that both candidates had received votes in the precinct.</p>

<sup>41</sup> **Ballots counted by hand in primary elections.** The DeQueen Bee; May 24, 2004. [http://www.dequeen.com/news/comments.php?id=1188\\_0\\_1\\_0\\_C](http://www.dequeen.com/news/comments.php?id=1188_0_1_0_C)

<sup>42</sup> **No explanation for ballot machine malfunction.** South Missourian; May 27, 2004; by George Jared, Staff Writer. <http://www.votersunite.org/article.asp?id=2013>

<sup>43</sup> **Commission OKs results of elections.** Jonesboro Sun, May 28, 2004. By LeAnn Askins. <http://www.jonesborosun.com/archivedstory.asp?ID=9486>



## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
May 2004	iVotronic firmware 7.5.1 and 7.4.5	<p><b>Miami-Dade County, Florida.</b> Information provided to the California Voting Systems and Procedures Panel meeting on April 22, 2004 brought to light serious audit problems with the iVotronic. A news article describing the situation was published on May 13, 2004. It tells about a memo written in June, 2003, by an election official, Orlando Suarez, describing "serious bugs" in Miami-Dade's ES&amp;S election equipment. ES&amp;S has known about this serious bug for <b>nearly a year</b> and has not fixed it.<sup>44</sup></p> <p>In a precinct that used nine voting machines, the audit log mentioned only seven. Instead, it reported the serial number of a machine that was not used in the precinct, and the ballot count for that machine equaled the count that should have been reported for the two missing machines.</p> <p>In the vote image report, three of the nine machines were missing. Again, the serial number of an unused machine appeared, and its count equaled the count of <b>two</b> of the missing machines. The vote counts from the other missing machines were simply missing.</p> <p>The article continues (emphasis added):</p> <p style="padding-left: 40px;">Puzzled by what he found in his review of the audit report and vote image report, Suarez reviewed each report a second time on a separate computer. This time he made an even more disturbing finding. Unlike in his first review of the audit log, he discovered that <b>38 votes cast went unreported in the audit log but not in the vote image report.</b> The 38 votes was the exact total number of ballots cast on the two machines not reported in the audit log.</p> <p style="padding-left: 40px;">In his second review of the vote image report, he found that the report showed two "made-up" machines which were not actually used at the precinct. The number of votes cast in the phantom machines matched the number of number of votes in the actual machines in the precinct.</p> <p style="padding-left: 40px;">"In my humble opinion (and based on my over 30 years of experience in the information technology field)," Suarez wrote, "I believe that there is/are a serious 'bug' in the program(s) that generate these reports making these reports unusable for the purpose that we were considering (audit an election, recount an election and if necessary, use these reports to certify an election)."</p>

<sup>44</sup> **Count Crisis? Elections official warns of glitches that may scramble vote auditing.** Miami Daily Business Review; May 13, 2004; by Matthew Haggman.  
<http://www.law.com/jsp/article.jsp?id=1084316008117>

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
May 2004	iVotronic	<p><b>Miami-Dade, Florida.</b> Another memo surfaces, this one regarding an election in Homestead in October 2003. <sup>45</sup> Excerpts (emphasis added):</p> <p style="padding-left: 40px;">The latest memo, dated Oct. 10, 2003, and addressed to Kaplan, said a review of the Oct. 7, 2003, mayoral and City Council primary election in Homestead, Fla., found that the iVotronic system's <b>audit log failed to account for 162 ballots cast.</b></p> <p style="padding-left: 40px;">All of the votes, however, were accurately tabulated, <b>according to the machines' manufacturer,</b> Elections Systems &amp; Software of Omaha, Neb.</p> <p style="padding-left: 40px;">According to the latest memo, the system's <b>audit log did not recognize five of the touch-screen machines</b> used in the Homestead election.</p>
2004		<p><b>Indiana.</b> WISH-TV interview with Ken Carbullido, ES&amp;S senior vice president of product and software development.</p> <p><a href="http://www.wishtv.com/Global/story.asp?S=1647611">http://www.wishtv.com/Global/story.asp?S=1647611</a></p>
May 2004	iVotronic	<p><b>Indiana.</b> ES&amp;S employee resigns from ES&amp;S after telling Indiana county clerk about the software switch. <sup>46</sup></p> <p style="padding-left: 40px;">Both Jackson and Sadler, the Johnson and Marion county clerks, were irked by the way ES&amp;S technicians surreptitiously installed certified software to replace uncertified versions on March 29 and 30.</p> <p style="padding-left: 40px;">Both clerks said they were told the ES&amp;S technicians were working on the machines for an entirely different purpose. Both clerks feel they were lied to.</p> <p style="padding-left: 40px;">Sadler said she learned about the deception from a whistleblower, ES&amp;S's Marion County project manager, Wendy Orange, who reported she was instructed to let Sadler think the technicians were there for a maintenance check. Orange has since resigned from the company.</p>

<sup>45</sup> **New Questions Arise About Touch-Screen Voting Machines.** Miami Daily Business Review ; May 27, 2004; By Matthew Haggman  
<http://www.nylawyer.com/news/04/05/052704i.html>

<sup>46</sup> **County struggles with voting quandary.** Daily Journal News Editor; May 27, 2004; By Bryan Corbin  
<http://www.thejournalnet.com/Main.asp?SectionID=1&SubSectionID=113&ArticleID=43657>

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
May 2004	iVotronic	<p><b>South Carolina.</b> After ES&amp;S won the bid to install the state's voting systems, a local company challenged the decision. During the process of evaluating the bid, the state's chief procurement officer said that a new round of bidding was needed since ES&amp;S had provided a deflated bid. <sup>47</sup></p> <p>The winning bid by Election Systems and Software Inc. was flawed because it failed to provide fixed prices for some equipment and services for the full seven years of the contact, said Mike Spicer, the state's chief officer in charge of buying computers and other high-tech gear.</p> <p>If the company had followed the state's request and included all items in its bid, the \$35.5 million bid "could easily exceed" a \$36 million cap set by the S.C. Election Commission, Spicer wrote.</p>
May 2004	ES&S Printery	<p><b>St. Francis County, Arkansas.</b> ES&amp;S, the company in charge of printing ballots for the county did not send them in time and delayed early voting by at least a week, according to Judy Armstrong, the county's election coordinator.<sup>48</sup></p>
May 2004	Model 150	<p><b>Sevier County, Arkansas.</b> The chip programmed by ES&amp;S counted all ballots as blank. The test ballots were printed correctly, and the pre-election testing was successful. But then the ballots for election day were printed in a completely different print run, and the codes on these election-day ballots didn't match the codes on the computer chip prepared by ES&amp;S. <sup>49</sup></p>
May 2004	Optical scanner (possibly Model 150)	<p><b>Fulton County, Arkansas.</b> The chip programmed by ES&amp;S for the county's optical scanner didn't work. ES&amp;S claimed that the printer didn't send them all 16 ballots needed for the programming. The printer said he did send the entire set of ballots, and his records showed that the weight of the package mailed to ES&amp;S was the weight of 16 ballots. <sup>50</sup></p> <p>Riverside Graphics printer Michael Eaton insisted his company sent ESS [sic] a full set of ballots. "We printed the ballots for Independence County where there are three times as many people and we didn't have any problems. We've had this problem with ESS before," said Eaton.</p> <p>... He said Riverside Graphics checked its postage records, and the weight of the package sent to ESS was consistent with a package containing 16 ballots.</p>

<sup>47</sup> **New bidding ordered for S.C. voting machines.** The State; May 27, 2004; By Jim Duplessis, staff writer. <http://www.thestate.com/mld/thestate/business/8769956.htm>

<sup>48</sup> **Early voting runs into delays in 4 counties; suit filed in 1.** Arkansas Democrat-Gazette. May 7, 2004. By Stephen Deere.

<sup>49</sup> **Ballots counted by hand in primary elections.** The DeQueen Bee; May 24, 2004. [http://www.dequeen.com/news/comments.php?id=1188\\_0\\_1\\_0\\_C](http://www.dequeen.com/news/comments.php?id=1188_0_1_0_C)

<sup>50</sup> **No explanation for ballot machine malfunction.** South Missourian; May 27, 2004; by George Jared, Staff Writer

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
May 2004	Optical scanner (possibly Model 150)	<p><b>Craighead County, Arkansas.</b> The chip programmed by ES&amp;S for the county's optical scanner gave one candidate all the votes for constable. A manual recount revealed the error.</p> <p>A recount was made in the District 13 constable race because returns from Precinct 20 showed one candidate received all 158 votes cast in the precinct, and the opposing candidate doubted that.</p> <p>The incident was traced back to a computer chip coding error, and the result of the recount was that both candidates had received votes in the precinct.<sup>51</sup></p>
July 2004	Unity election management software	<p><b>All U.S. Counties that use ES&amp;S voting systems.</b> More and more bugs surface in the ES&amp;S software, but only in response to public records requests.<sup>52</sup></p> <p>In a June 3 letter to ES&amp;S, obtained by The Herald in a public records request, Miami-Dade County Supervisor of Elections Constance Kaplan demanded answers to three problems with the iVotronic equipment that she said could take "labor intensive and costly" actions to fix. She asked ES&amp;S to resolve these issues "expeditiously:"</p> <ul style="list-style-type: none"> <li>◆ The central database machines used to tabulate votes are incapable of holding all the audit data at once, requiring a "labor intensive and costly" solution that could complicate a recount in a close race. Audit data is used to back up the system.</li> <li>◆ The optical scanners used to read absentee ballots have problems when information is merged from the three machines the county uses.</li> <li>◆ And the county could potentially mix up votes if it were to try to use phone lines to transmit data from the polling places to the election center, which it doesn't plan to do.</li> </ul> <p>The response from ES&amp;S? <b>Fix it yourself</b> by changing your election procedures to work around the bugs.</p> <p>ES&amp;S Senior Vice President Ken Carbullido responded to Kaplan on June 14, noting that each of the problems could be resolved if the county alters its procedures, reconfigures its software or, if it wants to transmit data from the polling places, redo the programming code in the machines or retrain its staff.</p>

<sup>51</sup> **Commission OKs results of elections.** Jonesboro Sun, May 28, 2004. By LeAnn Askins. <http://www.jonesborosun.com/archivedstory.asp?ID=9486>

<sup>52</sup> **Documents detail more voting machine flaws.** The Miami Herald. July 9, 2004. By Mary Ellen Klas. <http://www.miami.com/mld/miamiherald/9111841.htm>

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
August 2004	Unity Election Management System	<p><b>Natrona County, Wyoming.</b> The Unity Election Management System, used to tally votes from both optical scan machines and paperless electronic voting machines, failed to tally votes correctly.<sup>53</sup></p> <p>Noticing that the totals for the city of Evansville seemed low, Natrona County Clerk Mary Ann Collins checked the printouts from the precinct voting machines in Evansville and found that the totals didn't match the totals computed by the Unity software, which combines all the totals countywide.</p> <p>The error changes the order in which some candidates finished, but does not affect which candidates will advance to the general election. Only one candidate lost votes but five of the 10 municipal races in the county had changed totals.</p> <p>... Collins determined the software problem only affected nonpartisan races after checking the voting machine printouts and the absentee votes against the Unity software report in several partisan races. There does not appear to be any pattern in the skewed vote totals.</p>
August 2004	iVotronic	<p><b>Miami-Dade County, Florida.</b> The iVotronic touch-screen machines -- the ones with the software bugs that caused an uproar last May -- showed evidence of the same problems in the August primary. Not only was the low battery problem (which ES&amp;S claimed was repaired) still impacting the elections, problems also showed up with the features that are supposed to allow blind voters to vote independently.</p> <p>The county received <b>14,253 voter complaint forms</b> about these and other election-day problems.<sup>54</sup></p> <p>A survey of calls for assistance from poll workers to the elections department's "war room" on primary day shows three types of complaints:</p> <ul style="list-style-type: none"> <li>◆ The iVotronic's ADA model, an audio ballot machine meant for the visually impaired, stumped poll workers throughout the day by "freezing up" or switching to a "white screen," according to the forms election workers at the calling center were required to fill out for every call for help.</li> <li>◆ Complaints showed that poll workers faced with "dead" iVotronics discovered the machines came to life again after workers were instructed to plug them into different electrical outlets at precinct sites.</li> <li>◆ And frequently, poll workers reported problems with the iVotronics that were traced to low batteries.</li> </ul>

<sup>53</sup> **Clerk changes election vote totals.** August 21, 2004. By Matthew Van Dusen, Star-Tribune staff writer.  
<http://www.casperstartribune.net/articles/2004/08/21/news/casper/6c2e825b3f9e154187256ef70007adbb.txt>

<sup>54</sup> **Electronic voting machines had hitches, but no glitches.** The Miami Herald. September 2, 2004. BY Luisa Yanez.  
<http://www.kansascity.com/mld/kansascity/news/6821316.htm>

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Date	Machine	Place/Description
August 2004	Optech	<p><b>Muskegon, Michigan.</b> Optical scan machines failed to detect 2% of the votes for Township Clerk because the marks were too light. Originally, the machines reported that challenger Kris Tabler had lost to incumbent Jim Nielsen, 791-786. <sup>55</sup></p> <p>The ensuing canvassing process, which compares the results from the precinct reports to the results produced by the ballot-counting machines, found the same result.</p> <p>But Tabler paid for a recount in all seven township precincts, and the Muskegon County Board of Canvassers spent Wednesday, Thursday and Friday inspecting the ballots by hand. When they finished, the result was startlingly different.</p> <p>Tabler won the election over Nielsen by two votes, 804-802. Jerry Young, the candidate who finished a distant third, received 258 votes in the recount.</p> <p>Overall, the recount revealed the existence of 39 more votes cast in the clerk's race than the original count did.</p> <p>... Obviously the canvassers, counting by hand, were able to read some ballots that the computer "optical scan" machines didn't pick up, said Tom Higgins, chairman of the county board of canvassers. It's also possible that the machines simply read some ballots wrong.</p>

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<sup>55</sup> **Election turns around when inspectors 'see the light'.** Muskegon Chronicle. September 04, 2004. By Steve Gunn and Lynn Moore, Chronicle Staff Writers. <http://www.mlive.com/news/muchronicle/index.ssf?/base/news-5/109429297496130.xml>

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
September 2004	Optech 4-C	<p><b>Maricopa County, Arizona.</b> The original totals for State Representative in District 20 showed Anton Orlich in the lead over John McComish by four votes, and the close margin required a recount. The optical scan recount found nearly 500 additional votes for the five candidates in the race and changed the outcome, giving McComish the lead by 13 points.</p> <p>The election was certified by Judge Eddward P. Ballinger Jr.<sup>56</sup></p> <p>An attorney for Anton Orlich, the third-place finisher, argued that ballots were mishandled, a tabulation machine malfunctioned and because of these reputed errors, voter intent was not preserved in the recount.</p> <p>Though Lisa Hauser asserted that the county Elections Department violated statutes by excessively handling and improperly storing the 25,000 District 20 ballots, the clearest error was with the machines.</p> <p>"The recount can't be trusted because of this anomaly," Hauser said. "Voters can't trust it. Voters of District 20 can't trust it. I don't believe this court should trust it."</p> <p>...In court, Karen Osborne, the election director for Maricopa County, attributed the mushrooming of votes to the machine's reading of mailed-in early ballots with undervotes, those that indicated a vote for only one candidate instead of two.</p> <p>"The IV-Cs have a great deal more sensitive technology," Osborne said. "They will pick up marks on ballots."</p> <p>All early ballots were read by the machines during the primary and on the day of the recount. However, <b>one machine registered an 18 percent variance in reading undervotes</b>, Hauser said.</p> <p>The mail-in ballots apparently were more susceptible to having small, sometimes imperceptible marks. Or the voter may not have used the correct pencil or pen and the machine picked it up, Osborne said.</p> <p>"It's never going to pick it up perfectly," said Osborne, who said the machines were tested before the recount.</p> <p>A representative from the company that makes the Optech IV-C did not provide testimony, although she works in a county building and was issued a subpoena.<sup>57</sup></p>

<sup>56</sup> **McComish GOP winner in District 20 by 13 votes, recount shows.** The Arizona Republic. September 21, 2004. <http://www.azcentral.com/community/ahwatukee/articles/0921district20-recount-ON.html>

<sup>57</sup> **McComish's District 20 2nd-place finish confirmed.** The Arizona Republic. September 24, 2004. Nedra Lindsey. <http://www.azcentral.com/news/election/legislature/articles/0924recount.html>

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
October 2004	iVotronic	<p><b>Craven County, North Carolina.</b> Voters' choices register incorrectly on the touch screen. The county official attempted to recalibrate the screens, but two machines had to be taken out of service.<sup>58</sup></p> <p>Charlie Jackson was one of at least three voters, who experienced difficulty registering his vote on electronic voting equipment.</p> <p>"I got to the machine and punched the box for Bush/Cheney on the very first item for president and the light appeared by Kerry/Edwards," said Jackson.</p> <p>"I called one of the poll workers over and said, 'hey, how about this?' He said to just keep tapping and it will register right so I pushed several times and the one for Kerry/Edwards disappeared and Bush/Cheney came up," said Jackson, who left confident that his vote was properly recorded.</p> <p>... "I went down myself and checked all the machines," [Craven County Board of Elections director Tiffiney] Miller said. "I checked again, recalibrated; there was still some concern so I pulled two machines.</p> <p>VotersUnite! does not share Charlie's confidence. If re-calibrating doesn't correct the problem, there is little reason to think that calibration was the cause of the problem.</p>
October 2004	iVotronic	<p><b>Bexar County, Texas.</b> Touch screens register votes incorrectly on the screen. The theory is that voters who rest a hand on the touch screen while voting may inadvertently cast their votes wrong without knowing it.<sup>59</sup></p> <p>A San Antonio Business Journal reader brought the problem to the attention of the newspaper after he claims his vote was registered for the wrong candidate. He said the bad vote was cast because he inadvertently rested his hand on the screen of the voting kiosk while using his other hand to vote.</p> <p>"The machine registered the vote from my thumb when I rested my hand on the screen to vote," the reader claims.</p> <p>The reader says he caught his error on the review screen before finalizing his vote, but he questions whether everyone -- especially new voters -- would do the same.</p> <p>[Bexar County Elections Administrator Clifford] Borofsky says his office has received only two reports in 60,000 votes cast of votes being registered by individuals inadvertently resting their hand on the voting screen. However, there is no way to know how many people made the mistake without knowing it.</p>

<sup>58</sup> **You touch it, you voted for it.** San Antonio Business Journal. October 21, 2004.  
<http://sanantonio.bizjournals.com/sanantonio/stories/2004/10/18/daily37.html>



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Date	Machine	Place/Description
November 2004	iVotronic	<p><b>Broward County, Florida.</b> Fifty voters waited for hours to vote early, but then they were turned away because the paperless electronic voting machines at the site malfunctioned. Early voting is intended as a convenience for voters, but it may have disenfranchised some. <sup>60</sup></p> <p>Hundreds of voters showed up to vote early at Howard Forman Health Park, so many that a decision was made to keep the voting facility open until 11 p.m.</p> <p>Some people waited in line from early in the day until after the sun went down. Unfortunately, for a group of about 50 people, the waiting did not pay off. A mechanical problem with the voting machines caused election workers to close down polling place.</p> <p>The group of 50 frustrated voters will have the opportunity to be first in line to vote today. Poll workers took down their numbers and names and will move them to the head of the line.</p> <p>For one couple, it may not be enough. They were voting on Sunday because they planned to leave on vacation today. Now they will have to choose to cancel their trip, or give up their chance to vote.</p>
November 2004	Votronic	<p><b>Craven County, North Carolina.</b> All vote totals in nine of the county's 26 precincts were electronically doubled. Correcting the mistake changed the outcome of at least one race.<sup>61</sup></p> <p>The glitch occurred Tuesday night as absentee ballot totals for one-stop early voting at three Craven County locations and ballots mailed-in were being entered, said Tiffiney Miller, Craven County Board of Elections director.</p> <p>The Elections Systems and Software equipment had downloaded voting information from nine of the county's 26 precincts and as the absentee ballots were added, the precinct totals were added a second time.</p> <p>An override, like those occurring when one attempts to save a computer file that already exists, is supposed to prevent double counting, but did not function correctly, Miller said.</p>

<sup>59</sup> **You touch it, you voted for it.** San Antonio Business Journal. October 21, 2004.  
<http://sanantonio.bizjournals.com/sanantonio/stories/2004/10/18/daily37.html>

<sup>60</sup> **Voters Turned Away After Waiting Hours.** WPLG Local 10. November 1, 2004.  
<http://www.local10.com/news/3878344/detail.html>

<sup>61</sup> **Election problems due to a software glitch.** Sun Journal. November 05, 2004. By Sue Book.  
<http://www.newbernsj.com/SiteProcessor.cfm?Template=/GlobalTemplates/Details.cfm&StoryID=18297&Section=Local>

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Date	Machine	Place/Description
November 2004	iVotronic	<p><b>Lexington County, South Carolina.</b> Officials can't figure out how to retrieve 200 electronic votes from a malfunctioning iVotronic electronic voting machine.<sup>62</sup></p> <p>...town officials are searching for a way to tally more than 200 ballots stuck in a broken voting machine.</p> <p>Those uncounted ballots aren't crucial to determining the outcome of the race for mayor and three council posts.</p>
November 2004	Optical scan	<p><b>Carroll County, Arkansas.</b> A mis-programmed chip from ES&amp;S skewed the results from the JP District 2 race.<sup>63</sup></p> <p>The glitch was discovered by Carroll County Election Commission members when they met to certify election results Monday at the Berryville courthouse.</p> <p>It is believed that the programming alignment was out of kilter, as provided by Election Systems and Software, the company that programs computer chips to read the local ballots.</p> <p>As a result, ballots for the JP District 2 race will either be hand counted, or re-run through the optical scanner machine once the correct computer chip is provided.</p>
November 2004	iVotronic	<p><b>LaPorte County, Indiana.</b> The electronic voting machines reported 300 votes in every precinct, eliminating over 50,000 voters.<sup>64</sup></p> <p>At about 7 p.m. Tuesday, it was noticed that the first two or three printouts from individual precinct reports all listed an identical number of voters. Each precinct was listed as having 300 registered voters. That means the total number of voters for the county would be 22,200, although there are actually more than 79,000 registered voters.</p> <p>The problem still wasn't fixed two days after the election.<sup>65</sup></p> <p>LaPorte County Clerk Lynne Spevak told the Herald-Argus this morning that her office is waiting to receive a computer program from Chicago-based Election Systems and Software that should correct the problem.</p>

<sup>62</sup> **Lexington town leaders criticize slow vote count.** The State. November 4, 2004. By Tim Flach, Staff Writer.  
<http://www.thestate.com/mld/thestate/news/local/10094010.htm>

<sup>63</sup> **Computer glitch blamed for miscount in JP voting.** Carroll County Star Tribune. November 10, 1004. By Anna Mathews. Reproduced at  
<http://www.votersunite.org/article.asp?id=3889>

<sup>64</sup> **Worse Than 2000: Tuesday's Electoral Disaster.** Truthout.org. November 8, 2004. By William Rivers Pitt.  
[http://www.truthout.org/docs\\_04/110804A.shtml](http://www.truthout.org/docs_04/110804A.shtml).  
 Original article can be purchased at: <http://www.michigancityin.com/articles/2004/11/04/news/news02.txt>

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
November 2004	Unity 2.2	<p><b>Guilford County, North Carolina.</b> ES&amp;S early voting machines had capacity problems, which affected anywhere from 6,000 to 20,000 ballots. The totals were so large, the tabulation computer threw some numbers away. Retallying changed two outcomes and gave an additional 22,000 votes to Kerry.<sup>66</sup></p> <p>The biggest change in vote totals outside Mecklenburg was in Guilford County, which includes Greensboro. The computer that tabulates the totals choked when officials uploaded the early voting numbers, which was a particularly large batch of data.</p> <p>"So it just threw some of (the votes) away," said Guilford County elections director George Gilbert.</p> <p>... The new Guilford numbers boosted Atkinson's votes by nearly 12,000 in the superintendent's race, putting her ahead of Republican Bill Fletcher, who got 3,000 more votes in the update.</p> <p>The Guilford totals didn't change President Bush's win in the state, but did shift the vote total by 22,000.</p> <p>In a letter to Guilford County, Ken Carbullido, Vice President of ES&amp;S Product Development, explained in very technical language that when the vote totals reached 32,767 (32K), it began subtracting from the totals. This same problem occurred in the 2004 general election in Broward County had.<sup>67</sup></p> <p>The 32,767 capacity limitation at a single precinct level is a function of the design and definition of the results database used by ERM. The data storage element used to record votes at the precinct level is a two byte binary field. 32,676 is 2 to the 15<sup>th</sup> power, which is the maximum number held by a two byte word (16 bits) in memory, where the most significant bit is reserved as the sign bit (a plus or minus indicator). Additionally, ERM precinct count level data is stored in a binary computer format known as two's complement.....</p> <p>In the letter, Mr. Carbullido admitted they knew about the problem but had not advised the county.</p>

<sup>65</sup> **Voter turnout still not known.** Herald Argus. November 4, 2004. By Kori Kamradt, County Reporter.  
<http://www.heraldargus.com/content/story.php?storyid=5304>

<sup>66</sup> **Winner so far: Confusion.** The Charlotte Observer. November 5, 2004. By Mark Johnson.  
<http://www.charlotte.com/mld/observer/news/local/10104576.htm?1c>

<sup>67</sup> <http://www.votersunite.org/info/GuilfordESS.pdf>

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
November 2004	Unity 2.2	<p><b>Orange County, Florida.</b> Among the election equipment foul-ups in Florida, vote tabulating software reached its 32,767 capacity and began counting backwards. <sup>68</sup></p> <p>Sometimes the problem is that votes were miscounted. That's what happened, officials say, with precinct-by-precinct results posted on the Orange County elections office Web site showing that Democrat John Kerry beat Republican President Bush by 9,227 votes in Orange.</p> <p>That was off by 8,400 votes. Officials working for Bill Cowles, the Orange elections supervisor, said the correct totals, available elsewhere on the site, showed that Kerry bested Bush in the county by only 827 votes.</p> <p>The cause of the error, Orange officials said Thursday, was a software program that could not tabulate more than 32,767 votes in a single precinct. On election night, officials anticipated the problem and adjusted for it, deputy election official Lonn Fluke said Thursday.</p> <p>... A similar discrepancy affected vote totals posted online for the U.S. Senate race between Republican Mel Martinez and Democrat Betty Castor. But neither online counting problem made it into the real totals sent to Tallahassee, election officials insist.</p>
November 2004	Unity 2.2	<p><b>Broward County, Florida.</b> A software flaw cause Broward County officials to initially report an inaccurate outcome for Amendment 4. <sup>69</sup></p> <p>Amendment 4, which would allow Miami-Dade and Broward counties to hold a future election to decide if slot machines should be allowed at racetracks, was thought to be tied. But now that a computer glitch for machines counting absentee ballots has been exposed, it turns out the amendment passed.</p> <p>"The software is not geared to count more than 32,000 votes in a precinct. So what happens when it gets to 32,000 is the software starts counting backward," said Broward County Mayor Ilene Lieberman.</p> <p>That means that Amendment 4 passed in Broward County by more than 240,000 votes rather than the 166,000-vote margin reported Wednesday night.</p>

<sup>68</sup> **Distrust fuels doubts on votes: Orange's Web site posted wrong totals.** Orlando Sentinel. November 12, 2004. By David Damron, Sentinel Staff Writer. <http://www.orlandosentinel.com/news/orl-locvotetotals12111204nov12,1,2450210.story>

<sup>69</sup> **Broward Vote-Counting Blunder Changes Amendment Result.** News4Jax.com. November 4, 2004. <http://www.news4jax.com/politics/3890292/detail.html>  
**Gambling vote glitch mars tally.** Miami Herald. November 5, 2004. By Erika Bolstad And Curtis Morgan. <http://www.miami.com/mld/miamiherald/10103931.htm>

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
November 2004	iVotronic	<p><b>Broward County, Florida.</b> In addition to severe mix-ups in polling places (some of which were moved at the last minute) and disenfranchisement of voters who cast invalid provisional ballots because of the mix-up, Broward County experienced many electronic voting machine malfunctions. Some broke down, others registered votes incorrectly. <sup>70</sup></p> <p>At least 21 voting machines in Broward County malfunctioned and were replaced Tuesday, and some votes on at least one of them might have been recorded inaccurately, election officials said.</p> <p>An improperly calibrated machine at the polling place at 2501 Coral Springs Dr. in Coral Springs was used by an undetermined number of voters before it was replaced, said Carl Fowler, public information officer for Broward's Emergency Management Agency.</p> <p>If voters on that machine had reviewed their ballots before hitting the red "Vote" button, they could be certain their votes were recorded accurately, Fowler said.</p> <p>However, if they did not review their ballots, it is possible that some votes were recorded inaccurately. If a machine is not properly calibrated, a vote intended to be cast for one candidate can be recorded for a different candidate. "I think the chances that happened are slim, but it's a possibility," Fowler said.</p> <p>The machines were taken to the Voting Equipment Center in Fort Lauderdale, where the votes cast on them were to be counted. County officials said they did not know how many votes had been recorded on any of the malfunctioning machines.</p> <p>Many of the other 20 machines suffered problems with electrical power, said Gisela Salas, Broward's deputy supervisor of elections. Most of them had been used by some voters before being taken out of service.</p>

<sup>70</sup> **Few problems reported as Broward vote continues.** Orlando Sentinel. November 2, 2004. By Mike Turnbell, Craig Lewis, Jean-Paul Renaud, Jeremy Milarsky. Ian Katz & Buddy Nevins: Staff Writers

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
November 2004	iVotronic	<p><b>Mahoning County.</b> Many problems plagued the ES&amp;S iVotronic touch screen voting machines in 16 of the 312 Mahoning County precincts. <sup>71</sup></p> <p>Some of the machines malfunctioned, others had problems with the personal electronic ballot cartridge placed into the machines before each vote to count the ballots, and other problems were caused by human error, Munroe said. ...</p> <p>Also, there were 20 to 30 machines that needed to be recalibrated during the voting process because some votes for a candidate were being counted for that candidate's opponent, Munroe said. ...</p> <p>About a dozen machines needed to be reset because they essentially froze.</p>
November 2004	Optical Scan	<p><b>Lancaster County, Nebraska.</b> As the optical scanners read the election-day ballots, occasionally, they added votes. While County Election Commissioner David Shively explained that the software was reading ballots twice, ES&amp;S referred to the misread as a mechanical problem. <sup>72</sup></p> <p>Inexplicably, both Shively and the Nebraska deputy secretary of state for elections, Neal Erickson, agreed that "the malfunctions were not the type that taint vote counts."</p> <p>The problem, described by Shively: While machines correctly fed themselves just one ballot at a time, their software at times incorrectly detected two ballots. The machines in all cases stopped short of actually counting two ballots, Shively said, and instead responded by shutting down.</p> <p>... Shively said it became clear after 2 p.m. Tuesday that problems existed. At that time, officials began testing the six machines – four for election-day ballots, two on loan from Election Systems &amp; Software to count absentee ballots – and found that two were not correctly matching results.</p> <p>That came as a surprise, Shively said, because all were tested late last week and performed well.</p> <p>After consulting with ES&amp;S, Shively decided to use the two absentee-ballot machines to speed up the election-day counting. But the problem was apparently contagious.</p> <p>From about 10:30 p.m. to 12:30 a.m., the machines were purring along glitch-free, Shively said. "I thought, 'Boy, we're back in business,'" Shively said.</p> <p><b>Then the two-ballot problem described by Shively began, plaguing almost all the machines, drastically slowing the count.</b></p>

<sup>71</sup> **Errors plague voting process in Ohio, Pa.** Vindicator. November 3, 2004. Vindicator staff. <http://www.vindy.com/basic/news/281829446390855.php>

**Back up! We need back up!** Roanoke.com. November 11, 2004. By Brian Gottstein. <http://www.roanoke.com/columnists/gottstein/13719.html>

<sup>72</sup> **Problem machines spur call for recount.** Lincoln Journal Star. November 14, 2004. By Nate Jenkins.

<http://www.journalstar.com/articles/2004/11/14/election/doc4189b9c7f14bf764391458.txt>

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Date	Machine	Place/Description
November 2004	Optical scanner, central count	<p><b>Sandusky County, Ohio.</b> An election turnout of 131% tipped off the election officials that the optical scanners had been adding phantom votes to the totals. Officials concluded that ballots had been counted twice and speculated that some ballots had been fed through machine more than once.<sup>73</sup></p> <p>Barb Tuckerman, director of the Sandusky County Board of Elections, said when she reviewed election information Nov. 8 she discovered the mistake.</p> <p>"Clyde had 131 percent voting," Tuckerman said. "That's not possible. I knew there was something amiss."</p> <p>After reviewing the computer discs used to store precinct tallies, officials came to the conclusion that some ballots in nine precincts were counted twice.</p> <p>The mistake may have occurred when counted ballots were stacked with those waiting to be counted, [Barb] Tuckerman [director of the Sandusky County Board of Elections] said.</p> <p>... The double counting creates a situation that can't be solved until questions are answered.</p> <p>The answers are needed to determine whether Republican Irma Celestino or Democratic incumbent Anna Senior wins the County Treasurer's contest, but Secretary of State Kenneth Blackwell advised against an investigation.</p> <p>Tuckerman said the Secretary of State's office advised against investigating how many twice-counted ballots are included in the election's unofficial results and instead suggested the local board focus on determining the official election results.</p>

<sup>73</sup> **Some ballots counted twice: Discovery raises further doubt about close treasurer race.** The News-Messenger. November 16, 2004. By LaRaye Brown, staff writer. <http://www.thenews-messenger.com/news/stories/20041116/localnews/1601347.html>

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November 2004	Optical Scan	<p><b>Sarpy County.</b> Election officials ended up with around 10,000 phantom votes (more votes than voters). They still don't know what went wrong. <sup>74</sup></p> <p>Johnny Boykin lost his bid to be on the Papillion City Council. The difference between victory and defeat in the race was 127 votes. Boykin says, "When I went in to work the next day and saw that 3,342 people had shown up to vote in our ward, I thought something's not right."</p> <p>He's right. There are not even 3,000 people registered to vote in his ward.</p> <p>For some reason, some votes were counted twice.</p> <p>Deputy Sarpy County Election Commissioner Ed Gilbert says, "It affected 32 of the 80 precincts. And I suppose as many as 10,000 votes."</p> <p>... No one is sure exactly what went wrong.</p> <p>Astonishingly, election officials are projecting a winning candidate based on the assumption that the votes were counted twice and that the outcome wouldn't be affected.</p> <p>Election officials say they don't believe the glitch will impact who won and who lost any of the races. They figure that when votes were doubled in a particular race, the totals were doubled for both candidates. Vote totals would be skewed but percentages would not change.</p> <p>In spite of that, the candidates want to know the real numbers.</p> <p>VotersUnite contacted the Sarpy County Elections office and was told that ES&amp;S had analyzed the problem and determined it to be "mechanical and procedural." That was all the election staff knew.</p>
November 2004	Optical scan	<p><b>Medford, Wisconsin.</b> Four and a half months after the election, a consulting firm discovered that ES&amp;S had programmed the optical scanners incorrectly, failing to account for partisan elections. <sup>75</sup></p> <p>That failure meant that the votes of everyone who voted straight ticket - anyone who voted only for candidates of a single party - were not counted. In all, about 600 of 2,256 ballots cast were not counted, [Taylor County Clerk Bruce] Strama said.</p> <p>... Medford and Taylor County officials have been told by Nebraska-based Election Systems &amp; Software that the city will be reimbursed for the costs of setting up the vote-counting machine in the fall because the program was faulty. A spokeswoman said the company takes full responsibility for the error.</p>

<sup>74</sup> **Countinghouse Blues: Too many votes.** WOWT Omaha. November 5, 2004. <http://www.wowt.com/news/headlines/1161971.html>

<sup>75</sup> **About 600 Medford ballots cast in November ignored.** Marshfield News-Herald. March 12, 2004. By Jake Rigdon. <http://www.wisinfo.com/newsherald/mnhlocal/285285292773470.shtml>



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Date	Machine	Place/Description
November 2004	Optical scan and Unity	<p><b>Grays Harbor, Washington.</b> Elections officials started recounting about 28,000 ballots on Tuesday after the ES&amp;S Unity reporting system showed too many votes.<sup>76</sup></p> <p>[County Auditor Vern] Spatz said unusually high turnout aroused suspicion that something might be wrong. On Monday, Grays Harbor County was reporting 93 percent turnout, much higher than anywhere else in the state. Officials checked the system and found the problem.</p> <p>After ballots were counted, the results were saved on computer disks and downloaded into another computer to keep a running tally. Some of the disks were apparently downloaded twice by mistake, Spatz said.</p> <p>The recount changed the outcome of the Governor's race in Grays Harbor County.</p> <p>VotersUnite contacted Mr. Spatz and mentioned that ES&amp;S optical scanners had double-counted ballots in other states during the November election. He was surprised and interested. He was also concerned because ES&amp;S Unity Election Management software is supposed to prevent cartridges from being downloaded twice.</p>
November 2004	iVotronic	<p><b>Vanderburgh County, Indiana.</b> Phantom votes appear in the electronic totals ... and other troubles.<sup>77</sup> At several polling places, the paperless iVotronic voting machines recorded phantom ballots, that is, more ballots than the number of voters signing in to vote. At others, there were fewer ballots than voters.</p> <p>Workers in the Election Office are doing a precinct-by-precinct study of votes cast compared to signatures. Most of the county's 139 precincts have been checked. Workers are paying particular attention to precincts where the discrepancy of votes and signatures is more than 10.</p> <p>At the Knight 1 precinct in eastern Vanderburgh County, there were 25 more votes than the poll book said there should have been, while at the Center 14 precinct, there were 12 fewer votes than signatures.</p> <p style="text-align: right;"><i>(continued on next page)</i></p>

<sup>76</sup> **Gray's Harbor County re-count boosts Gregoire.** kgw.com. November 16, 2004. By Rebecca Cook, Associated Press.  
<http://www.kgw.com/sharedcontent/APStories/stories/D86D7FA80.html>

<sup>77</sup> **Election results don't add up: Review shows discrepancies in voting.** Evansville Courier & Press. November 23, 2004. By John Martin.  
[http://www.courierpress.com/ecp/news/article/0,1626,ECP\\_734\\_3348316,00.html](http://www.courierpress.com/ecp/news/article/0,1626,ECP_734_3348316,00.html)

**Voting machine troubles cause long lines: Abell blames untrained poll workers for troubles.** Courier & Press. November 2, 2004. By Philip Elliott.  
[http://www.courierpress.com/ecp/indiana\\_elections/article/0,1626,ECP\\_1957\\_3299354,00.html](http://www.courierpress.com/ecp/indiana_elections/article/0,1626,ECP_1957_3299354,00.html)

**Voting machine service called poor.** Courier & Press. November 11, 2004. By John Martin.  
[http://www.courierpress.com/ecp/news/article/0,1626,ECP\\_734\\_3320070,00.html](http://www.courierpress.com/ecp/news/article/0,1626,ECP_734_3320070,00.html)

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Date	Machine	Place/Description
November 2004	iVotronic	<p><b>Vanderburgh County, Indiana.</b> <i>(continued)</i></p> <p>County Clerk Marsha Abell attributed the missing and phantom ballots to voters and/or poll workers, but not the machines.</p> <p>She said that because of those long lines, there were instances of voters signing in but then leaving before voting. In other cases, voter confusion about a final step in the electronic voting process caused some votes to be canceled, Abell said.</p> <p>... There were instances of voters walking away before going through that final step, Abell said. And other voters, Abell said, may have managed to vote without first signing the poll books.</p> <p>... Polling locations at Dexter and Tekoppel elementary schools and the VFW Hall all had trouble early in the day. Voters stood in more than two-hour lines while technicians scurried to repair or replace the machines.</p> <p>Voting at Dexter Elementary came almost to a complete standstill when three of the four machines crashed.</p> <p>The vote-counting process also was delayed when a power cord malfunctioned.</p> <p>Attributing the phantoms to the poll workers would sound more plausible if Vanderburgh County hadn't had so many machine malfunctions during the election, some of which the County Clerk, again, blamed on poll workers.</p> <p>County Clerk Marsha Abell blamed poll workers for causing dozens of voting machines to freeze during this, their first general election.</p> <p>However, there are some in the county who realize the machines just might be flawed.</p> <p>County Commissioners President Catherine Fanello said she still wants an independent audit.</p> <p>... "I really think it's imperative to make sure the equipment is working properly for \$2.9 million," Fanello said.</p>

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November 2004	Model 150 Optical Scanner	<p><b>Pike County, Arkansas.</b> A damaged optical scanning machine lost nearly 700 votes.<sup>78</sup></p> <p>"I'm so upset over this that I can't sleep," said Sandy Campbell, clerk of Pike County, Ark. ... "We had no idea this had happened. But I'll know what to look for in the future. We'll try never to let this happen again."</p> <p>"We sent a technician to Pike County to check," said Meghan McCormick, spokeswoman for Omaha-based Election Systems and Software Inc., which manufactured Pike County's optical scan machine. "There was a scratch on Sensor 'A' that has already been repaired. The scratch probably occurred during the election, but we'll never be certain."</p>
November 2004	Punch card	<p><b>Wichita County, Texas.</b> An excessively high undervote rate (26%) in early voting affected all the contests in about one-fifth of the precincts.<sup>79</sup></p> <p>More than 6,900 of about 26,000 ballots - mostly early votes - did not record votes for president with 10 of 52 precincts reporting. Similar problems were noted on all other races.</p> <p>Such a high count of "undervotes" is unusual, Gossom said.</p> <p>"We think the problem was in the program and the way it counted straight party votes," Martin said.</p> <p>ES&amp;S sent a technician to test the equipment, but no one could determine the cause of the problem. A hand count determined the results.</p> <p>The clerk's office was rampant with questions, but no answers Wednesday as county officials and political party representatives worked to remedy polling problems.</p>

<sup>78</sup> **Election study finds widespread ballot-counting problems.** Scripps Howard News Service. December 20, 2004. By THOMAS HARGROVE.  
<http://www.knoxstudio.com/shns/story.cfm?pk=MISCOUNT-ELECT-12-20-04&cat=AN>

<sup>79</sup> **Polling problems plague Wichita.** Times Record News. November 3, 2004. By Robert Morgan, Matt Terrell and Brent D. Wistrom. Reproduced at  
<http://www.votersunite.org/article.asp?id=3672>

**Waiting in Wichita: Count could resume today.** Times Record News. November 4, 2004. By Robert Morgan.  
<http://www.dfw.com/mld/dfw/news/nation/10097146.htm>; Reproduced at <http://www.votersunite.org/article.asp?id=3690>

**County's software woes cause undervote.** Star-Telegram. November 4, 2004. By Bill Hanna, Star-Telegram Staff Writer.  
<http://www.dfw.com/mld/dfw/news/nation/10097146.htm>

## ES&S in the News – A Partial List of Documented Failures

Date	Machine	Place/Description
March 2005	iVotronic	<p><b>Miami-Dade, Florida.</b> A computer error failed to count votes during the March 8 special election, calling into question five other local elections.<sup>80</sup></p> <p>Electronic voting machines tossed out hundreds of ballots during this month's special election on slot machines -- and elections workers have traced the same computer error to five other municipal elections in the past 12 months.</p> <p>...The department has identified five questionable municipal races: West Miami, Bay Harbor Island and Surfside as well as a February election in Golden Beach and a January vote on incorporating Cutler Ridge.</p> <p>The electronic voting machines showed a total of 1,246 undervotes for the March 8 slots referendum, while there were only 61 on the absentee ballots. Since there was only one item on the ballot, undervotes in this case mean the ballots were completely blank.</p> <p>According to Miami-Dade Elections Supervisor Constance Kaplan:</p> <p>Of the electronic undervotes, 477 could be blamed on an faulty computer program that should have protected people's votes even if they didn't press the flashing red button that finalizes the process.</p> <p>In those cases, poll workers are supposed to insert a cartridge that tells the machine to count a "Yes" or "No" vote. <b>But the bad coding told the machines to ignore the voter's selection.</b></p> <p>The blaming began immediately:</p> <p>Kaplan called it human error. Two election supervisors have been reassigned. She also blamed Elections System &amp; Software, which makes the iVotronic. Kaplan said a project manager with ES&amp;S failed to detect the coding problem.</p> <p>In a statement, ES&amp;S wrote: "Ultimate responsibility for all aspects of an election lies with the county . . . Under no circumstances would we ever have recommended this change to this particular default setting. In fact, we train election workers against it."</p> <p>The following day, Kaplan resigned as Elections Supervisor.<sup>81</sup></p>

<sup>80</sup> **Voting glitches found in 6 recent elections.** Miami Herald. March 31, 2005. By Tere Figueras Negrete and Noaki Schwartz.  
<http://www.miami.com/mld/miamiherald/news/local/11271837.htm>

<sup>81</sup> **Miami-Dade elections supervisor quits amid pressure over voting snafus.** Miami Herald. March 31, 2005. By Noaki Schwartz.  
<http://www.miami.com/mld/miamiherald/11279670.htm>

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March 2005	iVotronic	<p><b>Broward County, Florida.</b> One of the two items on the March 8 ballot failed to appear on the screen for many of the voters who participated in the Parallel Election Project.<sup>82</sup></p> <p>What we discovered was that in the Parallel Election 16 voters signed, wrote and testified that the Commissioner Race was missing on their ballot. That only the Gambling Amendment was included in their ballot.</p> <p>Out of 125 Ballots we had 1 voter who testified the Gambling Race was not on their ballot. Ladies and Gentlemen, thanks to the Parallel Election Project we were lucky enough to catch that voter in order to prove the reason for the only machine under vote.</p> <p>Less than 1% of the voters had no Gambling issue on the ballot, but between 13-14% were missing the Commissioner's Race! And as mentioned previously the Pro-Gambling group paid for the election.</p>
April 2005	iVotronic	<p><b>Kershaw, South Carolina.</b> Initial results for the County Council seat showed 2440 phantom votes — 3208 votes, 768 voters. The corrected results overturned the Democratic primary.<sup>83</sup></p> <p>Unofficial vote totals that night showed 3,208 of District 2's 5,128 registered voters had cast ballots in the Republican and Democratic primaries. A manual recount Thursday proved only 768 votes were cast.</p> <p>Garry Baum, public information director for the State Election Commission, blamed a "human accounting error."</p> <p>A new electronic voting system being used in 15 counties in South Carolina calls for a cartridge from each precinct to be plugged into a computer to count the votes.</p> <p>"When the cartridges were being read they were mistakenly read ... again," Baum said. "And so you had what looked like additional numbers."</p> <p>Tuesday night, a commission employee did not check a box on the computer screen that would have prevented multiple readings, Baum said.</p> <p>VotersUnite.Org wonders how many times the cartridges were read to obtain an initial total more than four times the number of ballots case. We also wonder why a system would be designed to allow result cartridges to be read multiple times.</p>

<sup>82</sup> **First "Grass Roots" Parallel Election Project.** March 8, 2004. By Ellen H. Brodsky, project coordinator. <http://www.ecotalk.org/FirstParallelElection.htm>.

<sup>83</sup> **Counting error overstates votes.** The State. April 29, 2005. By Kristy Eppley Rupon. <http://www.thestate.com/mld/thestate/news/local/11518670.htm>

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May 2005	iVotronic	<p><b>Charleston, South Carolina.</b> Software problems cropped up on the new ES&amp;S touch screen machines.<sup>84</sup></p> <p>Residents from Hollywood and Sullivan's Island all put their prints on the new touch screen voting machines.</p> <p>Officials say there were a few kinks. Voters reportedly had problems seeing the names of the candidates.</p> <p>The problem was said to be the result of a glitch in the software. Officials are working on a solution.</p>
May 2005	Optical scanner	<p><b>Forrest County, Mississippi.</b> The number of ballots counted by the optical scanner didn't match the number of votes reported by the computer.<sup>85</sup></p> <p>There were also some discrepancies in the Ward 4 Republican race between Andrew Ellard, Lloyd B. "Rink" Russell and Brian Lucas.</p> <p>The problem?</p> <p>ES&amp;S, the Omaha, Neb.-based company that is leasing voting equipment to the city for the primary, runoff and general elections, sent the wrong type of counter to Hattiesburg.</p> <p>The <i>right</i> type of counter - an infrared machine instead of a visible light machine - arrived Thursday night.</p> <p>Note from VotersUnite: The industry is moving toward visible light scanners because they read the ballot marks more reliably than infrared scanners. This article leaves many unanswered questions.</p>

<sup>84</sup> **New Voting Machines.** ABCNews4.com. May 5, 2004. By: NeYama Duncan. <http://www.abcnews4.com/news/stories/0505/225939.html>  
(<http://www.votersunite.org/article.asp?id=5349>)

<sup>85</sup> **Problems delay final vote count.** Hattiesburg American.com. May 7, 2005.  
<http://www.hattiesburgamerican.com/apps/pbcs.dll/article?AID=/20050507/OPINION01/505070323/1014/NEWS01>

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Date	Machine	Place/Description
May 2005	iVotronic	<p><b>Miami-Dade, Florida.</b> New evidence shows both phantom votes and lost votes in the November election. The number of voters reported by election workers didn't match the number of ballots cast in 260 (35%) of Miami-Dade's 749 polling places. Some showed more votes than voters ("phantom votes"); others showed significantly more voters than ballots cast. <sup>86</sup></p> <p>While some of the discrepancies can be traced to sloppy procedures and training, others are evidence of problems not yet explained.</p> <p><i>Phantom votes:</i> [A] precinct with a major difference was Precinct 362, which recorded 583 votes and 859 signatures. A review of that precinct's signature log found 580 signatures.</p> <p><i>Phantom votes:</i> in Precinct 41 there were 910 votes and 844 signatures, a difference of 62.</p> <p><i>Lost votes:</i> At combined Precinct 117/166, the ballots totaled 995 and the signatures numbered 1,276.</p> <p><i>Phantom votes ... then more phantom votes:</i> For Precinct 816, in the Church of the Ascension at 11201 SW 160th St., a Review inspection of the voter log showed 945 signatures, while the iVotronic computer tape showed a count of 1,032. But the individual machine counts are listed on the tape as well, and they add up to 945. But the number certified by the canvassing board came in at 1,116 votes.</p> <p>In this case, the discrepancy may have been due to an iVotronic machine malfunction. Lynn Kaplan, a volunteer observer for the reform coalition who was at that polling place on Nov. 2, said in an interview that as a poll worker was closing down one of the iVotronic machines at the end of the day, an error message popped up on the machine's digital screen saying: "Internal malfunction/unit closed to save data/<b>vote data corrupted.</b>"</p> <p>... [Martha Mahoney, a University of Miami law professor and member of the reform coalition who led the analysis] said the situation in Precinct 816 highlights the need for better procedures and training for reconciling signature and ballot totals. She also stressed that the county must investigate discrepancies to see if they resulted from fraud or equipment malfunction.</p> <p>The Secretary of State's office has refused to get involved.</p> <p>Jenny Nash, a spokeswoman for Florida Secretary of State Glenda Hood, said the issue of reconciling signature totals and machine counts was a local one and is not the concern of her office. "Each supervisor has their own process for how they reconcile the numbers," Nash said.</p>

<sup>86</sup> **Elections Discrepancies found in 35 percent of Miami-Dade precincts.** Daily Business Review. May 06, 2005 By: Jessica M. Walker; [http://www.dailybusinessreview.com/news.html?news\\_id=34733](http://www.dailybusinessreview.com/news.html?news_id=34733) (subscription only)

**Discrepancies found in votes, signatures.** A study on the November general election shows thousands of discrepancies between the number of votes cast and signatures collected by poll workers at the end of the day. Miami Herald. May 7, 2005. By Noaki Schwartz and Jason Grotto. <http://www.miami.com/mld/miamiherald/news/local/11586356.htm?template=contentModules/printstory.jsp>